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FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

Member

FEBRUARY, 1942

Vol. 95, No. 2

Fourteen Lives Lost When Lynn, Mass., Apartment House Burns

A CASE-SHEPPERD-MANN PUBLICATION

Full Dress for VICTORY

A new color trim to replace the chrome-plate is a part of YOUR contribution to insure VICTORY. No sacrifice in performance of your fire engine has been necessary—yet YOUR cooperation has made available such critical materials as nickel, chromium, copper and stainless steel for production of armor and equipment for our armed forces.

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FEDERAL

Vertical Sirens

are the logical choice for air raid warnings because—

- Their piercing sound is radiated equally in all directions.
- Weatherproof construction assures operation under all weather, climatic and atmospheric conditions.
- Grease sealed bearings will remain "trouble free" even if inspection is neglected.
- Ample overload capacity and precision construction assure dependability and long life.
- Proved in actual service in war-torn Europe.

Write today for Bulletin No. 63-A.

FEDERAL ELECTRIC COMPANY, Inc.

"SIREN HEADQUARTERS"

8702 SO. STATE STREET CHICAGO, ILLINOIS

FIRE ENGINEERING

A Consolidation of Fire and Water Engineering, The Fire Engineer and Fire Protection

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FRED SHEPPERD
Editor
N. N. WOLPERT, *Assistant Editor*

Time is Short

WE HAVE a tremendous job to do, and time is fleeting.

● Daylight saving (or "war-time") helps to prolong the working day, but it can't actually increase the number of workers.

● Shortage of man power is making us take advertising more seriously, because in war time perhaps even more than in normal times, advertising is the cheapest way of doing a selling job—quickly and effectively.

● With fewer salesmen available, with traveling more difficult and expensive, manufacturers can still talk to you directly and convincingly through the pages of this publication.

● Study the advertising in this issue; and keep an eye out for the next issue, the March FIRE ENGINEERING, which will be an extremely important "*National Defense Number*," featuring every angle of fire protection and civilian defense in war time.

● The *Ed*itorial and *Ad*itorial pages are of equal importance!

The Publishers

January 1, 1942

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the tenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York City, also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price U.S. and Latin America, $2 a year; Canada, $2.50; Foreign, $3; Single copies, 25c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879.

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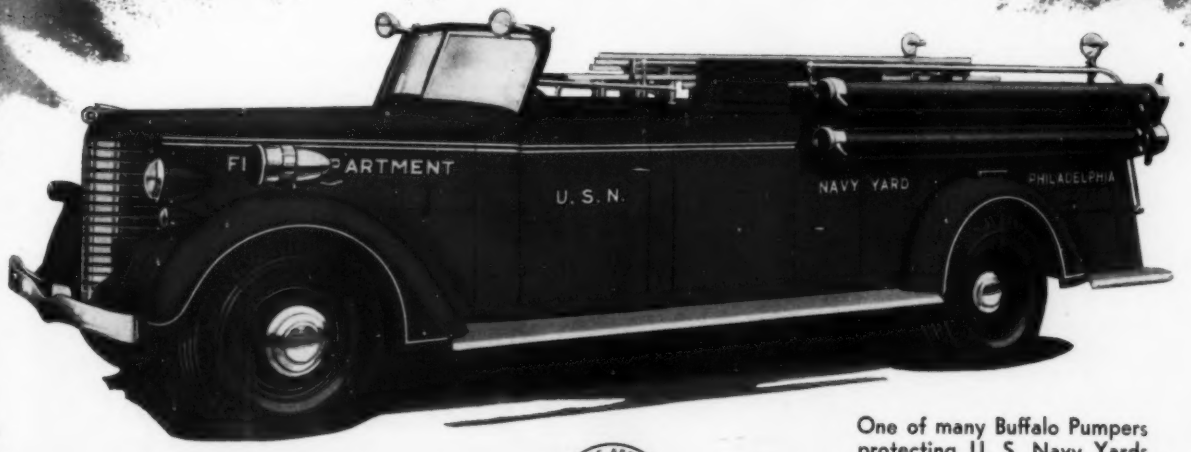
PRACTICAL FIRE DEFENSE



One of many Buffalo Pumpers protecting U. S. Navy Yards

BUFFALO FIRE APPLIANCE CORPORATION

FIG. 109 —WITH VALVE

FIG. 114 —VALVE

The Buckeye Plain Brass Whistle is furnished with or without a valve in the base. The stem is securely screwed into the base and supports the bell which can be screwed up or down for adjustment.

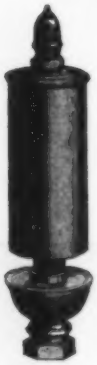


FIG. 111 —WITHOUT VALVE

Buckeye Chime Whistles are also furnished with or without a valve. The bell is cast in one piece so there is no possibility of the parts wearing loose.

FIG. 112 —WITHOUT VALVE

FIG. 110 —WITH VALVE

Buckeye Junior Whistles are so designed that they can be promptly installed on any make of car which may be pressed into emergency service.

FIG. 935 —AUTO EXHAUST WHISTLE

Why Risk Disaster in YOUR City?

If the need should come ***suddenly*** to warn ***everybody*** in your city of an air raid, there is just one way to do it instantly—USE WHISTLES.

Buckeye Whistles are compelling air-raid signals. They are installed in many of the country's largest cities for just such an emergency. Actual tests show that their shrill, penetrating, unmistakable blasts ***get people off the streets . . . and warn them in their homes!*** They can be operated by steam or compressed air on factories, public buildings, apartments and many other places.

The Buckeye Junior Exhaust Whistles are used on Chiefs' cars, Air-Raid Wardens' cars, Ambulances, Police and other emergency cars. Fig. 936 Whistles (larger) are used on heavy fire apparatus.

Write or wire for complete information.

BUCKEYE IRON & BRASS WORKS
324 E. Third Street **Dayton, Ohio**

BUCKEYE
Fire Department Accessories

Photo, Courtesy of U. S. Army

IN SUPPLYING E&J RESUSCITATORS TO OUR MILITARY FORCES, THE E&J MFG. CO. IS INDEED PROUD OF THE CONTRIBUTION IT IS MAKING TOWARDS THE WELL BEING OF OUR HEROIC WARRIORS. . . . . .

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E & J

RESUSCITATOR is helping to save the lives of our country's fighting men

FOR CIVILIAN DEFENSE

The E & J Resuscitator Inhalator and Aspirator can be used with absolute safety and extreme effectiveness in the most desperate cases of asphyxia complicated by severe internal injuries, bad burns, fractured ribs, etc. Your organization cannot properly and conscientiously serve your community if you are not prepared to administer artificial respiration both mechanically and manually. Both methods are absolute necessities in modern warfare and modern living.

BE ADEQUATELY PREPARED FOR EVERY EMERGENCY

Write to any of our distributors listed below for further information

E & J MANUFACTURING CO., GLENDALE, CALIF.

Philadelphia — New York City — Pittsburgh — Atlanta, Ga. — Boston — Chicago

Two men teams are recommended to handle the Model CA. First man has mounted the ladder, second man is shown releasing quick-opening buckle of strap holding chute pack to frame.

Chute pack remains on the ground and unfolds as man mounts ladder. Bracket does not interfere with ladder climbing.

First man has entered window and pulls bracket into place. As soon as bracket is in place, second man is free for other duties.

ANNOUNCING THE MODEL CA EVACUATOR

Hundreds of lives are lost annually as the result of fires in the smaller communities and residential sections of cities. Specifically designed to combat these losses is the new Model CA Evacuator. It occupies very little space on apparatus. Standard chute length is 50 feet, permitting use up to 40 vertical feet. Longer or shorter chutes are available if desired.

The Model CA Evacuator is priced so reasonably that no community can afford to be without this protection to their citizens. Write today for catalog. A demonstration in your community will be arranged upon request.

E & E MANUFACTURING CO.

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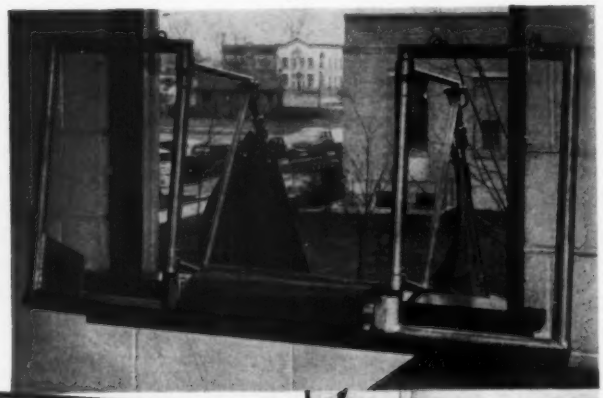
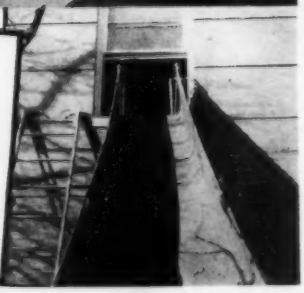




***Above:*—Showing bracket in place, behind window and sill, weight of chute holds it firmly in place.**

***Right:*—Evacuator makes perfect chute to ground. Its tubular framework is rustproof and the chute is fire and mildew proof.**

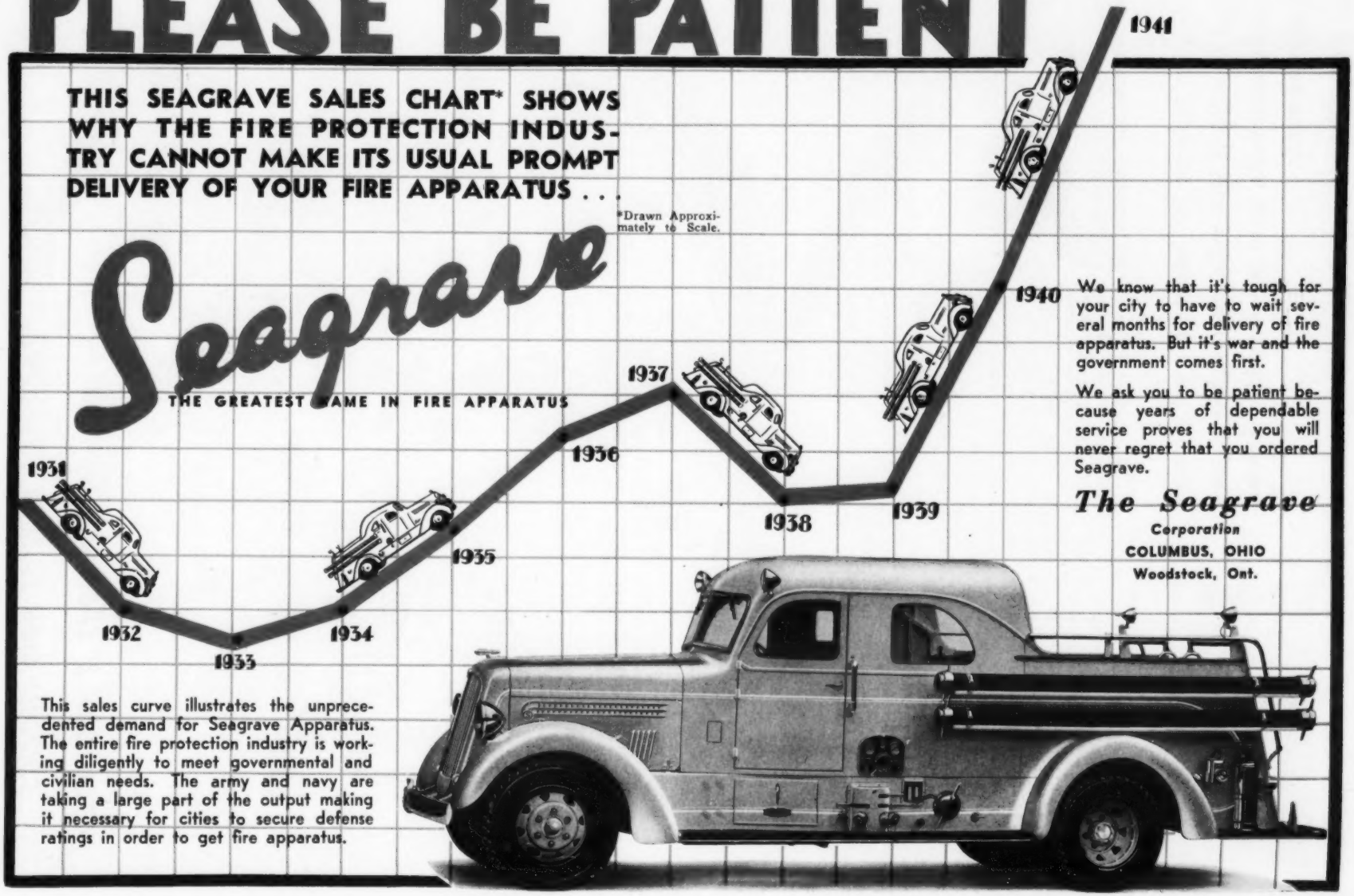
PLEASE BE PATIENT

THIS SEAGRAVE SALES CHART* SHOWS WHY THE FIRE PROTECTION INDUSTRY CANNOT MAKE ITS USUAL PROMPT DELIVERY OF YOUR FIRE APPARATUS . . .

*Drawn Approximately to Scale.

Seagrave

THE GREATEST NAME IN FIRE APPARATUS



This sales curve illustrates the unprecedented demand for Seagrave Apparatus. The entire fire protection industry is working diligently to meet governmental and civilian needs. The army and navy are taking a large part of the output making it necessary for cities to secure defense ratings in order to get fire apparatus.

We know that it's tough for your city to have to wait several months for delivery of fire apparatus. But it's war and the government comes first.

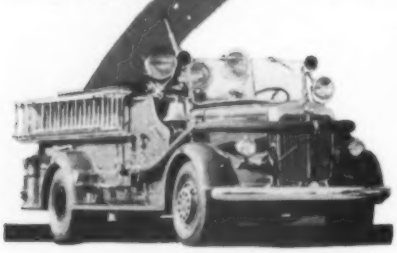
We ask you to be patient because years of dependable service proves that you will never regret that you ordered Seagrave.

The Seagrave
Corporation
COLUMBUS, OHIO
Woodstock, Ont.

Please mention FIRE ENGINEERING *when writing advertisers*

"Looks as if that new Mack's making the boys a mite lazy!"

Mack type 19-1000 gallon . . . . . combination pumper—one of the 6 Macks in the Fire Department of the City of Stockton, Cal. Chief Ralph Thomas has owned nothing but Macks since the city's first motorized purchase in 1933! Several of these Macks have operated as long as 57 hours continuously without shutdown or fault—in the Taylor Milling Fire of 1935.



Have a heart, Hezekiah! If the boys have been lucky enough to get their hands on the best pumper going—can you blame 'em for letting her show her stuff?

You see, Hezekiah, that Mack isn't just a re-vamped truck chassis. It's been built from the ground up to perform a specific job with the highest possible performance.

Every single vital part in that pumper has been made under rigid Mack supervision—from the molten metal stage up—in Mack factories. That's one of the important reasons why Mack pumping apparatus has superior power, superior stamina, superior dependability.

And another thing—Mack's got 70 direct factory branches—for quick, economical service, when needed.

No wonder 200 towns and committees have added Mack apparatus during the past year! No wonder the Army and Navy are using Mack apparatus for protection in vital areas!

Toss away your bucket, Hezekiah. Mack's on the job . . . everything's under control!

Write for complete information on a Mack fire-fighter for your needs today.

The Mack Fire Apparatus Line includes triple and quadruple pumpers from 200 to 1500 gallon capacity, hose wagons, city service ladder trucks, squad cars—comprising 14 distinct and specialized models.

Mack

MACK MANUFACTURING CORPORATION, FIRE ENGINE DIVISION, LONG ISLAND CITY, N. Y.

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

FIRE ENGINEERING

FEBRUARY, 1942 VOL. 95. NO. 2

With the Editor

Blackout Hazards A report from Seattle, Washington, of a store that was practically burned out before the fire was discovered stresses a new hazard incidental to blackouts—the covering of windows of buildings in such a manner that the interiors thereof cannot be seen from the street.

While the fire in Seattle was in all probability due entirely to accident, it does indicate the ease with which a fire bug may perform his nefarious trade if shielded from the sight of passers-by on the street.

If windows are to be blacked out, it seems to us that movable screens should be provided rather than the painting of the windows an opaque color. Furthermore, the windows should not be covered except during period of authorized blackout.

If such a plan is not followed, a very marked increase in the number of serious incendiary fires may be the result.

Making provisions for a blackout is commendable, but in the interest of safety from fire, covering of windows should be forbidden except upon official authorization.

Twenty-Five Dollars Worth of Junk The volunteer fire department of the Village of Buchanan, New York, accepted an invitation from one of its members, proprietor of a junk yard, to take its pick of the abandoned trucks and cars there, and proceeded to do so. When they had finished the task, they had assembled a fire truck of which they are very proud. Only twenty-five dollars were spent, and this for two ladders, a can of polish and a gallon of red paint.

In commenting upon the work of the Buchanan volunteers, a New York columnist said: "Buchanan has set the course we will all need to follow in the months to come. Junk heaps are no longer to be despised; indeed, there must be no junk heaps. If a town—or a business—needs new equipment, wails about priorities will not solve the problem, but Yankee ingenuity, a respect for making do, a spirit of "Let's do it," may. We salute the fire department of Buchanan, New York."

It seems to us that whether assembled in the shape of a fire truck, or still in the piles of the junk yard, the material would still be junk!

Fire fighting in these days is as much a part of national defense as fighting on the battlefield. We would not expect the army to build guns, tanks or other equipment from salvaged junk; why should fire apparatus, which bears an equal responsibility, be created from this source?

A Belated Compliment For years, Chief Nicholas A. Phelan of the Pittsburgh, Pennsylvania, Fire Department fought for fire department improvements, which were never forthcoming, due to politics.

Long before this country was in the war, he realized that a marked strengthening of the Pittsburgh Fire Department would be vital if production of material for war purposes had to be stepped up. He used every power in his means to wake up the city administration to the situation, but without success.

The first of this year he tendered his resignation as Chief. Upon tendering his resignation, he stated that he had worked for years but city officials paid no attention to his request. He had recommended a fire prevention bureau, the rebuilding of the training school, correction of the bad traffic condition on the streets, and many other necessary changes, but without avail.

And then, hardly after he had closed the door behind him upon leaving the department, the city administration ordered the advertising for bids for the purchase of eight pumpers and two aerial trucks.

Although he could get no cooperation from the city administration while in office, it must be of considerable satisfaction to Chief Phelan to realize that all his efforts are at last producing fruit. But it is an odd way to pay a compliment to a man by taking his advice after he has resigned.

Fred Sheppard

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Air Raid Signaling Systems

Fire Alarm Sirens and Air Horns Meet Urgent Needs

THE entry of this country into the World War and the possibility of aerial attack by enemy nations on American cities have developed urgent need for air raid signaling devices and systems. It was natural that municipal, state and Federal authorities should turn to the fire alarm field for such equipment, for this field has proven a testing ground for outdoor signaling apparatus.

The problem of fire alarm signaling in small towns differs widely from that in large cities. Whereas a siren or air horn may have several miles range in a small community, where there is a negligible collection of street noises, and where buildings are comparatively low, in large cities the range of effectiveness of such devices is very much reduced. The height of buildings, the intensified street noises and the difficulty of placing signaling devices at points where their full effectiveness may be secured all operate to limit the range of these devices.

Nevertheless, with proper placement, they may serve very effectively as air raid warning signals.

It should be pointed out that the area served per unit will have to be less in cities than in small communities and rural sections, and that a multiplicity of signaling devices will probably have to be employed.

The following article is designed to present to the fire service specific information on fire alarm signaling systems, now adapted for air raid alarms.

The Diaphone

The diaphone compressed air horn has for years served as a public alarm system, chiefly in the fire service and marine work. It lends itself effectively to code signaling.

Air compressors for use in connection with the diaphone may be operated by gasoline engines or by electric power. The diaphone, in addition to its use for fire alarm signaling, has been extensively used for fog signaling on the Great Lakes and along the seacoast, and by the U. S. Navy Department and the Canadian Ministry of Defense for emergency signaling purposes.

In closely built up areas it is stated that the Type B diaphone will effectively serve an area of four square miles.

The control valve on the diaphone is of the electrically operated, pneumatically powered type, and may be operated in response to signaling impulses transmitted over a normally closed mechanical circuit, by manual operation. The operating power is supplied by air pressure. The control valve is designed to transmit blasts of uniform duration irrespective of the time the control circuits may remain open.

The Diaphone, with Control Apparatus

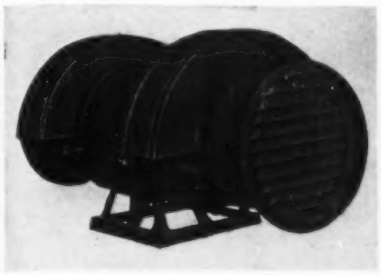
Each diaphone alarm station consists of the following equipment:

One diaphone horn, consisting of a cylinder, an air-driven piston, and a sound projector. The oscillations of the piston serve to interrupt the flow of air through coincident perpheral openings, thereby producing a sound wave of a pitch that will carry through other sounds.

Air Compressor

The air compressor unit, used in connection with the diaphone, has a piston displacement of approximately twenty cubic feet per minute. The compressor is normally driven by an air cooled gasoline engine rated at approximately 1800 RPM and capable of developing at least seven brake-horsepower. The engine is equipped with a complete remote con-

trol starting equipment consisting of an electric starter, an electric generator, a static unit, an automatic electric choke, an overload circuit breaker and generator cut out, a storage battery, and a pressure switch control operated by receiver.



Sterling Model M, Horizontal Siren

The unit is equipped with complete automatic control of the air pressure and is normally adjusted to start compression when the pressure in the air reservoir drops to 133 pounds and stops the engine when reservoir pressure is increased to 150 pounds. The air pressure is also automatically supervised and a supervisory signal is given in the event compression fails to start when the air pressure drops below 133 pounds.

The main storage reservoir is of steel plate, thirty-six inches by 108 inches dimension, and has an air capacity sufficient to sound 340 blasts of one second duration at one-half second intervals with a main tank pressure of 150 pounds per square inch, and a blowing pressure of thirty-five pounds per square inch at the horn.

An auxiliary storage reservoir is provided, made of rolled steel and of sixteen by forty-eight inches dimensions, with a pressure reducing valve. It is designed to maintain a blowing pressure of approximately thirty-five pounds per square inch at the horn.

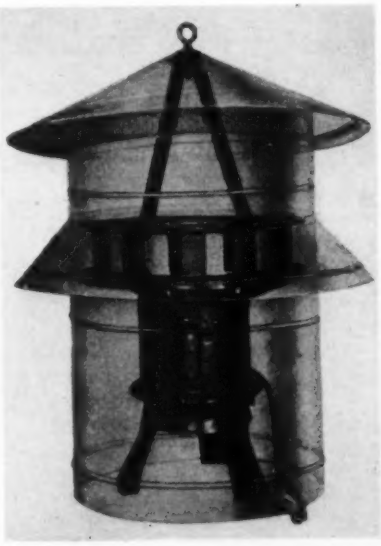
The net weight of a complete diaphone alarm outfit is approximately 3,000 pounds and the equipment may be installed wherever it may be properly supported. Preferably the compressor outfit and main reservoir should be mounted on concrete foundations at ground level with tubing extending to the diaphone installed at whatever height conditions warrant. For outdoor installations, steel towers afford a satisfactory method.

Code Signaling

In connection with transmitting code on the diaphone, a simple remote control code signaling system is provided. For individual installations the transmitter may be located either at or at any distance from the diaphone alarm outfit. In air raid alarm systems, involving a multiplicity of alarm outfits, the transmitter may be located at a central point and serve to control the operation of any or all alarm outfits simultaneously. An adequate air raid alarm outfit may be connected in the closed metallic alarm circuits of Gamewell type fire alarm systems without in any way interfering with fire alarm service and without being responsive to fire alarm signals. The air raid alarm system when installed in connection with fire alarm circuits involves only the alarm equipment for each location and the central control devices which will be substantially the same as for an independent air raid alarm system.

Electric Sirens

Selecting the proper electric siren for air raid alarms depends entirely upon the conditions encountered in the area to be served.



Federal 7½ H.P. Air Raid Siren Phantom View

Sound distribution and audibility are affected by many factors, such as location, height, wind velocity, obstacles, topography and atmospheric conditions. These factors are never identical in two different places, and in any given location will vary from day to day. Hence no positive claims are made by manufacturers regarding the distance any siren can be heard.

Local noise levels are detrimental to audibility. This means that a siren, or other signaling device, must produce sufficient volume at any specified point to overcome the other noise levels at that point, or the device is not effective. If it fails to do this, additional sound must be produced at that point by an additional signal which can be a small one nearby, or a larger one farther away. One of the prominent manufacturers of sirens states that "No definite guarantee of sound range is possible because of all these variable factors. Only for comparative purposes can we state that under average conditions of weather and topography, free from obstructions and high noise levels, the following ranges are estimated:

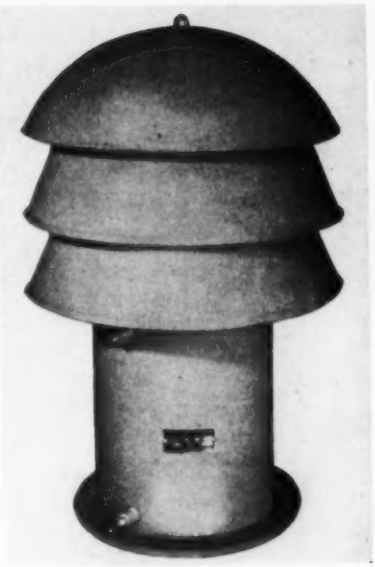
Type D—½	horsepower..	⅓ to ½ mile
No. 2 —2	horsepower..	½ to 1 mile
No. 3 — 3	horsepower..	1 to 1½ miles
No. 5 — 5	horsepower..	1½ to 2 miles
No. 7 — 7½	horsepower.	2 miles or better

"In noisy metropolitan business districts, the use of a number of smaller sirens is the more effective method. This is particularly true where tall buildings, close together, line the intercepting streets to form a veritable canyon confining the sound. A 1½ horsepower might be located at each intersection, supplemented by additional units in public buildings, especially noisy places, or confined spaces which shut out the outside sounds.

"In less noisy districts closely built up, with lower-lying buildings, two horsepower sirens at intervals of ¼ to ½ mile will prove very effective.

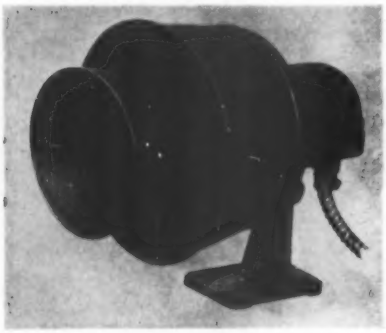
"In less thickly settled residential and suburban areas, 3, 5, or 7½ horsepower sirens a mile or more apart will usually serve adequately. In any of these optional recommendations, the larger units will provide greater sound intensity.

"Based on European use and pre-



H. O. R. Siren

liminary tests already concluded in the United States and Canada, the two horsepower siren seems pre-



Sparton Siren

ferred for most applications. If it has a universal motor, it can be used on 60 cycle A.C. current in one place and without any changes or delay, be operated on D.C., or 25 cycle A.C. at some other point."

Locating Sirens

With regard to location of sirens, W. W. Scott, Manager of the Signal Division of the Federal Electric Company, in a bulletin recently issued, recommends that for best results the sirens should be at an average height of 30 to 35 feet above street or ground level. Lower mounting tends to increase volume nearby, but reduces the sound range. Mounting the siren too high increases the maximum range, but may cause the sound to skip certain areas in between. If it is possible to try the siren at different heights before making permanent connections, the best height for local conditions can be determined.

The siren should be mounted in a place free from surrounding obstructions such as taller buildings, trees, etc. If located on a flat roof, it should be at least 8 to 10 feet above roof level, otherwise the sound will strike the roof and be deflected upward. If the roof has a parapet, the siren should be 8 to 10 feet above the ground of the parapet to prevent the sound waves being confined or deflected.

In certain installations the use of a tower or platform is advantageous.

Sirens are made in two types: general service and coding. The coding type of siren is designed to permit the sounding of blasts, while the general type, due to the period of time required for accellerating and decellerating, is not common used for coding. With regard to the operation of sirens for air raid purposes, general alarm sirens rather than code type are recommended.

Various signals are used in air raid warnings. In a suggested one, the indication for air raids consists of three different signals sounded by the siren:

The Alert—a preliminary warning of the approach of planes allowing time to prepare for blackout and to seek shelter. Four or five blasts about 8 seconds each.

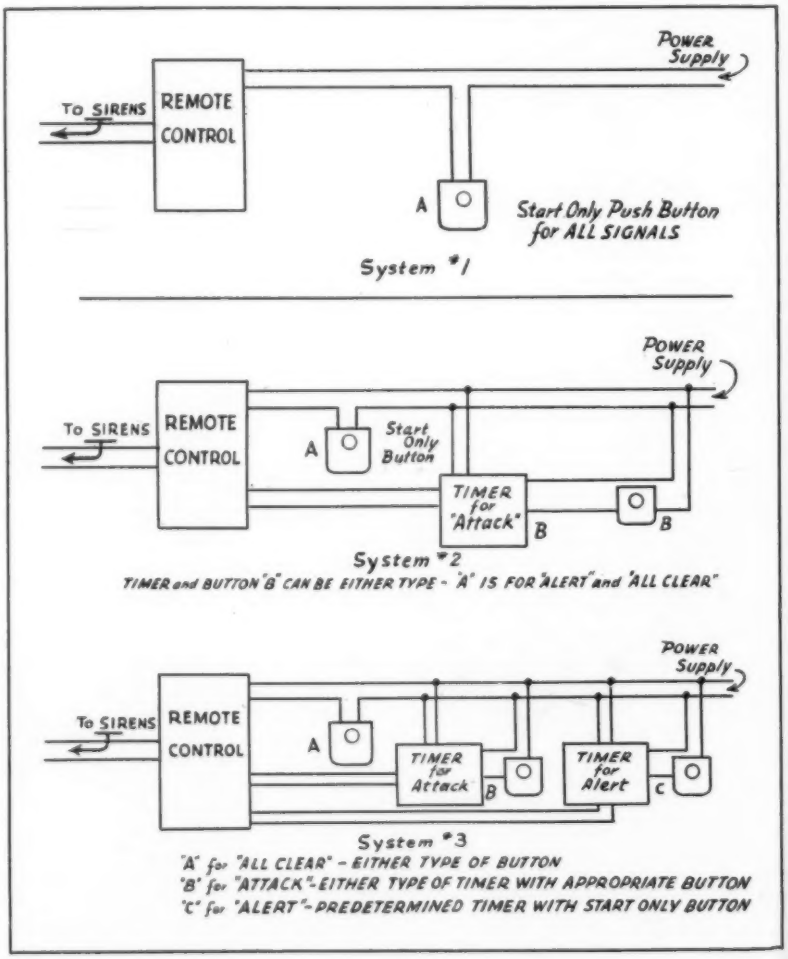
Attack—indicating the air raid actually has begun. Continuous sounding of siren up and down the scale for at least two minutes.

All Clear—all over. Restrictions lifted. One long blast at top pitch—20 to 30 seconds duration.

Some places, after a time, have eliminated the alert signal as unnecessary, since the attack signal can be sounded sooner to allow sufficient time for preparations. To give the different signals in warning of an air raid, a push button, manually operated can be used. This means that someone will have to remain at the button to alternately press and release it to obtain the up and down scale notes. A siren will ascend the scale to the maximum pitch and remain there as long as contact is maintained. The downscale note comes when the button is released and the siren coasts, rotating slower and slower until it stops. More accurate timing of the blasts can be assured by special timers.

Whistles

Variable pitch steam whistles may be used for air raid warning systems, but they have a disadvantage in that steam pressure must be provided at all times for operating the whistles. Thus, they must be employed at plants operating twenty-four hours a day, or on utilities where steam pressure is always available.



Typical Siren Connections for Air Raid Alarms

THIRTEEN LIVES LOST AT LYNN, MASS., APARTMENT FIRE

Advanced State of Fire When Alarm Was Sounded Responsible for Heavy Life Loss

By Alton H. Blackington

THIRTEEN persons lost their lives and forty-three others, including firemen, were seriously injured in a general alarm fire that swept the remodelled Melvin Hall apartment house in the heart of the business district of Lynn, Mass., early in the morning of January 20.

Chief Joseph E. Scanlon

Shortly before a taxi driver discovered the fire and sounded an alarm from Box 414 at 1:59 a.m., a patrolman, making his customary rounds, inspected the premises and found no signs of smoke or flame. Within a comparatively short time, however, the flames were breaking through the roof, and the upper floors were well alight when the first piece of apparatus rolled in.

The first alarm companies comprised three 1,000-gallon engines with five men each, two 85-foot aerial ladders with six men each, one rescue company with five men and three chiefs with three drivers.

One minute later an alarm from nearby box brought the same complement with two 75-foot ladders. A second alarm from Box 414 at 2:04 brought three additional engine companies with twelve men, two more ladder trucks and five men and a ladder from Revere and also a ladder company from the adjoining town of Swampscott.

At 2:06, just seven minutes after the first alarm was pulled, ten blows were sounded for the general alarm, skipping the third and fourth alarms. Four additional engine companies responded to box 414. The Swampscott engine went directly to the fire as did an additional company from Revere. One hundred off-shift men responded to the general alarm.

Chief Joseph E. Scanlon arrived at the scene seven minutes after the first alarm and noting the fire hazard, immediately sent an out-of-town call for ambulances, doctors, the Red Cross and additional apparatus.

As the companies rolled in, great sheets of flame lighted the swirling clouds of smoke that poured from every window. As the flame spread with incredible rapidity, leaping from floor to floor and window to window, dozens of tenants hung out of the windows screaming for help. Never in the history of the famous North Shore shoe city has such a spectacle been seen. District Chief Ed Mills, upon arrival, saw at least twenty heads silhouetted against the flaming windows on the fourth and fifth floors.

It was necessary to break down a ten-foot fence on the Exchange Street side of the fire to get into the rear alley. Ladders were quickly raised and twenty-five persons were brought down in this manner. Firemen, police and volunteers raced through the lower floors helping victims to safety but the most difficult tasks was the manning of the life nets. So thick was the smoke that poured from every window and rolled through the narrow alleys that most of the time the firemen couldn't see the windows above them where the victims were hanging, and the victims couldn't see the ladders or life nets. Many jumped; several hit the nets, but others missed entirely and fell onto the sidewalk below.

On the front of the building one man tied bed sheeting together and after dangling for some seconds at the end of his improvised life line, let go and dropped fifty feet through the smoke, striking a street light and then falling to the ground. There were no escape ropes

Courtesy of "Boston Globe"

Water Tower at Work on the Disastrous Melvin Hall Fire

Courtesy of "Boston Globe"

Chief Scanlon Supervises Removal of Victims from Melvin Hall Apartment Ruins.

in any of the rooms, as ropes are not required by law in apartment buildings of this type.

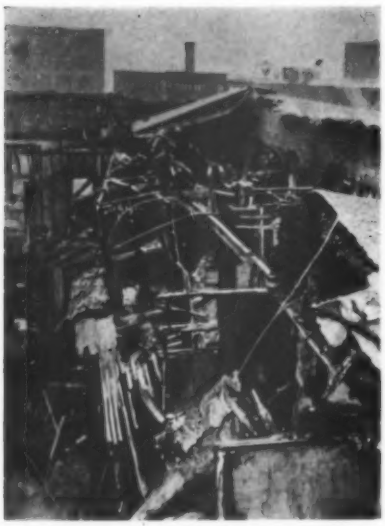
Except for one small fire escape leading from the top floor to a shed roof in the rear of the building, there were no fire escapes. The building had three stairways and complied with the law which requires "ample egress" from apartments of this type.

There were no sprinklers in the building and no automatic alarm. Had such provisions been made, it is certain the fire would have been discovered many minutes earlier and in all probability checked before it reached the proportions found by the department when they arrived.

After the rescues were made, the department turned their attention to confining the fire to the block in which it started, and in this they were successful. Twenty streams strategically placed confined the main part of the fire to the upper stories, and it was not necessary to ventilate the roof because the fire broke through the roof seven minutes after the first alarm and burned so fiercely that the roof caved in to the fourth floor twenty-two minutes after the fire was discovered. At 10:00 a.m. the next morning the building crashed down between the walls to the second floor.

When the fire was at its height, it appeared that it might spread to the adjoining Elks Building, and Chief Scanlon sent a call to Boston for a water tower. Chief Pope dispatched Tower 2 and a crew of seven men. They made the ten mile run to Lynn in record time. It was the first occasion that a water tower from Boston had been sent to Lynn. The tower took up a position on Spring Street, but as the fire was brought under control in about two hours, it was not sent into action.

Mutual aid from neighboring towns and cities was as follows: Saugus—engine and ladder truck; Revere—engine and ladder truck; Swampscott—engine and ladder truck; Peabody—engine com-



Courtesy of "Boston Globe"
Ruins of the Melvin Hall Apartment House

pany; Nahant—engine company; Marblehead—engine company; Lynnfield—engine company. Malden, Saugus, Revere, Swampscott and the General Electric Company sent ambulances which were kept busy for hours taking the dead and injured to hospitals and undertaking parlors.

Excellent work was performed by the Lynn Police Department in handling the crowds, and keeping traffic lanes open for incoming apparatus and the many doctors' cars and ambulances.

For several days a rigid and thorough investigation was in progress under the personal direction of State Fire Marshal Stephen C. Garrity who will make his findings direct to Governor Leverett Salstonstall. As this is written no cause has been established, nor has the exact location of the start of the fire been determined.

Much agitation is under way for new rulings and laws that will make it mandatory for all such apartments to have sprinklers in basements and hallways and outside fire escapes. Similar ideas were expressed following other disastrous hotel fires in the Commonwealth.

Despite rumors that always spread after a fire where there has been a great loss of life, it is a matter of record that the Melvin Hall apartments were inspected by members of the Lynn Fire Department on four separate occasions during the year 1941. Chief Scanlon's records show that the building was inspected on November 4 and one or two minor suggestions were made at that time and that on November 11, when the final inspection was made, these minor items had been corrected and everything was in order. A red tag from one of the extinguishers was found in the ruins showing that the extinguishers had been tested just before the fatal fire. However, there was no time to use any of them.

One of the victims of the fire was Fire Chief John Adams of Marblehead, who plunged from the roof to the small fire escape three floors below. He is reported to have suffered five broken ribs and other injuries. At the Mary Alley hospital in Marblehead, doctors said he would recover.

I. A. F. C. Directors Meet at Grand Rapids

The annual meeting of the Officers and Directors of the International Association of Fire Chiefs was held at the Hotel Pantlind, Grand Rapids, Mich., January 26 to 29.

The dates for the annual conference of the International Association of Fire Chiefs were set for August 4, 5, 6 and 7, with headquarters at the Pantlind Hotel.

Exhibits will be held at the new Municipal Auditorium, which is connected to the hotel.

Included in the proceedings was the report of the Secretary-Treasurer, which indicated an increase in advertising in the Proceedings in the past two years to such an extent that a thousand dollar deficit in 1939 has been replaced by a $300 profit in 1941.

The Officers and Directors voted unanimously to purchase fourteen $1,000 government bonds, and thus utilize money which at present is on deposit in savings banks.

Chief W. H. Palmer, Charlotte, N. C., Past President of the Association and representative of the Association on the Fire Advisory Committee of the Office of Civilian Defense reported the action taken by that committee.

Meeting at the same time as the Directors were the secretaries of the district organizations.

The secretaries recommended that all members be notified that registration fee at the convention does not constitute dues. Also that each member have evidence of membership in good standing before registration at the convention. It was suggested that a certificate of membership be issued to all members in addition to the present membership card which is furnished by the Association.

The Board of Directors took action on several matters relating to the proposed furnishing of fire apparatus by the Office of Civilian Defense to cities throughout the country.

They recommended a better grade of hose than that specified by the Office of Civilian Defense for fire department use, particularly in larger cities and in cities where defense industries are located. They also suggested where front drive pumps are being furnished by the government they should be mounted on new chasses, rather than furnished for attachment to municipal or other trucks already in service in cities. This resolution was passed in view of the fact that many municipal truck motors are not in good shape and could not be depended upon to carry the load imposed by a 500-gallon pump.

A resolution was also adopted recommending that the International Association of Fire Chiefs institute a nationwide program designed to educate the public in the essentials of fire prevention, and to make available to the public, through fire departments, information such as may be required to bring about this desired end.

Those present at the Directors and the Secretaries meeting included the following: Andrew T. Callahan, Harrison, N. J., President; Art J. Baker, Lewiston, Mont., Second Vice-President; Daniel B. Tierney, Arlington, Mass., Secretary-Treasurer; W. H. Palmer, Charlotte, N. C., Past-President; Jay W. Stevens, San Francisco, Cal., Executive Secretary; Fred Sheppard, Headquarters Manager; E. L. Matthews, Tuscaloosa, Ala., Director; Ross B. Davis, Navy Building, Washington, D. C., Director; Peter Steinkellner, Milwaukee, Wis., Director; Walter W. Stephen, Monsanto Chemical Company, Anniston, Ala., Secretary of the Southeastern Association; Charles E. Clark, Wayne, Pa., Secretary of the Eastern Association; Roy E. Mottesheard, Dearborn, Mich., Secretary of the Great Lakes Association; Ray Tiller, Waterloo, Ia., Secretary of the Missouri Valley Association; James Armstrong, Kingston, Ont., Secretary of the Dominion Association; Fred Higgins, Grand Rapids, Mich., Convention Host; James T. Keegan, Salvage Corps, Newark, N. J., Chairman of Exhibits; and Chief A. M. Jaeger, Ecorse, Mich.; Chief George Dansbury, Grosse Pointe Farms, Mich.; Ex-Chief George Mitchell, Newark, N. J., and Harry Cavanagh, American District Telegraph Company, New York City.

General Alarm Fire Destroys Four Buildings

A general alarm fire swept through four buildings in the business district of Waterbury, Conn., on January 8, causing damage estimated from $250,000 to $300,000 and injury to four members of the Waterbury Fire Department.

The blaze was discovered at dawn in the Beck shoe store on Bank Street and brought under control late in the morning after all but three of the city's fire apparatus battled the flames in sub-zero temperatures that froze the streams of water as they poured into the buildings. Responding on the first alarm, Fire Chief Thomas F. Cavanaugh immediately ordered a second and third alarm to the scene.

Two of the three story buildings were almost completely destroyed and two others nearby suffered extensive damage. Chief Cavanaugh and eight firemen narrowly escaped serious injury when a display window in a ground-floor store blew out and shattered them with glass.

In the Clayton jewelry store, occupying one of the street level business places, firemen carried out trays of valuables said to have been worth $150,000. They were removed to storage vaults. Most of the upper floors of the four buildings were occupied by doctors, dentists and beauty parlors.

The fire is believed to have started in the Beck Shoe Store. The flames spread quickly to the other three buildings after the roof of the first structure collapsed. Forty years ago on February 2, 1902, a million dollar fire swept through the same district with the temperature and high winds at about the same level.

THOMAS F. MAGNER

Fire Hydrants Sabotaged in Toronto

Thirty-nine fire hydrants in an area devoted to industries in Toronto, Ont., were found to be damaged, in an effort to sabotage its fire fighting facilities.

The soft brass spindles on the hydrants had been hammered out of shape so that the key wrenches used by the Fire Department to turn on the water would be of no use.

GOVERNMENT TO PURCHASE APPARATUS AND EQUIPMENT

Preliminary Survey to be Made of Possible Sources of Supply

THE following release has been received from the Office of the Chief of Engineers of the War Department.

"This office is compiling specifications prior to the procurement of fire apparatus and equipment for Civilian Defense. These specifications will be ready for mailing in the near future.

"A list of items which may be needed in considerable quantities is enclosed in duplicate. The purpose is to determine now which (if any) of the items are manufactured by you so that specifications may be mailed to you later covering the material which you may wish to supply.

"If you have not already done so, please send to this office your catalog of any equipment checked.

"Please fill out one of the enclosed forms and return it to W. W. Dean, Chief, Fire Prevention Section, Room 5029, Municipal Center Building, Washington, D. C.

"Very truly yours,
"W. W. Dean, Chairman
"Sub-Committee on Fire Apparatus"

List of Items Being Considered

Apparatus and Equipment for Fire Prevention being considered for Office of Civilian Defense.

Survey by Construction Division, Repairs and Utilities Branch, Fire Prevention Section.

Quantities undetermined at this time.
Original is to be mailed to W. W. Dean, Chief, Fire Prevention Section, Room 5029, Municipal Center Building, Washington, D. C.
Duplicate is to be retained by manufacturer.

Name of Mfgr.....
Address—Main Office .....
Address of Factory From Which Deliveries Could Be Made.....
Nearest Representative—Name .....
.....
Address .....
City & State.....
Telephone.....
Check items which you manufacture.

APPARATUS

☐ Trailers with special bodies and with direct connected gasoline engines and 500 G.P.M. centrifugal pumps.
☐ Self-contained pumping units on skids —for installation on trucks or trailers, including motors direct connected to 500 G.P.M. pumps.
Front mount pumps—centrifugal pumps without motors to be mounted on trucks, 500 G.P.M.

EQUIPMENT

Hose

☐ Hard Suction 4"—10' lengths.
☐ Soft Suction, cotton rubber lined, 3½" —12' lengths.
☐ Discharge, cotton rubber lined, 2½" and 1½".

Ladders

☐ Roof, solid side, 14'.
☐ Extension, solid side, 24'.

Extinguishers

☐ Pump type—4 gallons tank capacity.

Hose Line Equipment

☐ Strainers 4½" ☐ Reducers ☐ Adapters
☐ Connections ☐ Play Pipes ☐ Wyes
☐ Siamese ☐ Couplings ☐ Hose Jackets

Nozzles

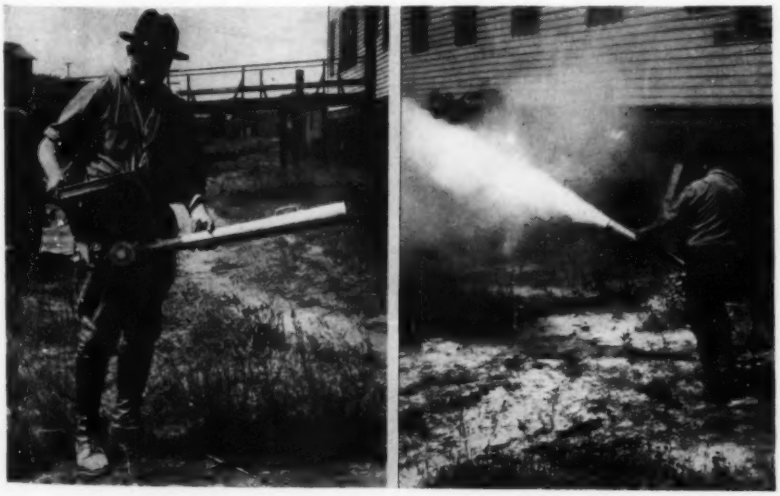
☐ Plain ☐ Shut off ☐ Spray

Wrenches

☐ Spanners ☐ Hydrant (adjustable)

Miscellaneous

☐ Hose and ladder straps. ☐ Electric lanterns (dry cell or storage battery type).
☐ Gas Masks, approved Type N, Bureau of Mines. ☐ Pick-head axes. ☐ Door openers ☐ Claw tools ☐ Pike poles ☐ Buckets ☐ Shovels ☐ Manila rope ¾" ☐ Bolt cutters ☐ First aid kits, 24 unit conventional Fire Department type.



Two Views of the Air-Mover Nozzle

Left: Air-Mover nozzle equipped with powder hopper. Right: Stream of fire-fighting powder being discharged from the unit.

Five Alarm Fire Destroys New York Pier

New York City lost a $130,000 pier in the early morning of January 8, because a longshoreman decided to smoke while astride a pile of copra in Pier 83, Hudson River at Forty-Third Street.

Copra, the dried broken kernel of the cocoanut from which cocoanut oil is extracted, is not highly volatile, but the cargo was encased in burlap bags, and the flames raced over the burlap coverings with phenomenal speed.

A freighter had arrived from South Africa two days before and was berthed on the north side of the 700-foot pier. A crew of eighteen longshoremen were unloading the copra from the ship.

About one-fourth of the cargo had been unloaded and piled along the south wall when the fire was discovered at 4:45 a.m. It started on top of a pile of some 3,000 bags, where a few hours earlier the longshoreman had been observed with a cigarette in his mouth.

Tugboats, using scows as buffers, rushed to the aid of the freighter and maneuvered her to a safe anchorage in midstream.

Four alarms were sounded at five-minute intervals, and a fifth alarm was turned in when the fire threatened the adjacent ferry terminal.

A hose truck of Engine Company 65 was buried under debris when the wooden roof of the pier caved in.

The coldest morning of the year was also the most arduous for the Fire Department for at 7 a.m., while the pier was still blazing, a four-alarm fire was discovered in a doll factory on West Thirteenth Street. At dawn most of the apparatus between the Battery and 125th Street was either responding to the alarms or rolling to other stations to "cover up" the companies in action. Three engine companies were brought over from Brooklyn.

Air Raid Wardens Cannot Carry Fire Arms

The Office of Civilian Defense has announced that air raid wardens will not be permitted to carry fire arms. They emphasized the fact that these citizens are engaged in passive defense only and that their duties would not include the engaging in combat with the armed forces of the enemy.

It is not contemplated that any part of the volunteer defense corps will carry fire arms with the possible exception of auxiliary policemen. Even this group will be armed only when local police authorities decide that the duty upon which they have the auxiliary policeman is such that he should be armed.

Compressed Air Spreads Fire-Fighting Powder

Ed. Lamb, designer of the "Air-Mover" nozzle, has recently completed a combination hopper and compressed air nozzle which makes possible the continuous discharge of a stream of powder on a fire. The powder is placed in a hopper and the nozzle attached to a compressed air line and the unit is ready to operate. The device continues to perform as long as the supplies of air and powder are maintained.

MAGNESIUM FIRES EXTINGUISHED WITH HARD COAL-TAR PITCH*

Bureau of Mines Develops New Technique in Controlling Incendiary Bombs

WITH the increased production and use of magnesium metal in aircraft and for other military purposes, the occurrence of magnesium powder explosions and magnesium fires has become more frequent. This has called attention to the need for a satisfactory extinguishing agent for magnesium fires.

In fighting these fires (as in the handling of magnesium incendiary bombs) it is as essential to know what not to do as what to do. One very important thing is not to disturb the fire violently by projecting on it jets of liquid, by throwing of an extinguishing agent, by drafts of air, or by any other means; such disturbance may spread the fire and may even result in an explosion. A second important fact to remember is what extinguishing materials not to use on magnesium fires.

Application of water, carbon tetrachloride, carbon dioxide, foam, and other common extinguishing agents on magnesium fires generally speeds up the rate of burning rather than stopping the fire; in fact in some cases use of these agents may result in violent explosions or in the emission of hazardous gases.

Careful application of dry sand, clean cast iron chips, talc, or slag by spreading on and around the burning magnesium helps to check the spread of flames, but if air reaches the fire through this covering the magnesium continues to burn underneath and the mass remains hot for a long time. Furthermore, some of these substances are highly abrasive and cannot be used on or near machinery without causing damage.

A highly satisfactory method for extinguishing magnesium fires of moderate size[1] has recently been developed at the Central Experiment Station of the Bureau of Mines, United States Department of the Interior, at Pittsburgh, Pennsylvania. The extinguishing agent used is a very hard coal-tar pitch (approximately 300° F. softening point), sometimes commercially designated as "fuel pitch." The size of pitch recommended for this use passes a ½-inch mesh sieve and is coarser than 35 mesh; particles finer than 35 mesh should not be used. When spread over a hot magnesium fire the pitch softens and seals the burning magnesium metal with an airtight blanket, thereby smothering the flames. The pitch is non-abrasive, easily available, and cheap.

To extinguish a magnesium fire on metal or dry concrete surfaces or on dry ground the procedure is simply to spread (do not throw) with a long-handled scoop or shovel a layer of pitch over the burning metal and then allow the pitch to soften and seal the fire. If, after the first application the pitch tends to burn with a short flame, this can be stopped by applying a second thin layer of pitch over the flaming parts. Smoke will sometimes issue from the hot mass for several minutes, but no re-ignition will result.

After the fire is extinguished the mass should be allowed to cool for a reasonable time (5 to 10 minutes is sufficient for small fires), then the pitch covering can be removed from the magnesium. If the fire is discovered early and the pitch is properly applied, most of the magnesium will be recovered before it is consumed. If the pitch is allowed to cool until it is quite hard it should be chipped off the underlying metal or other surface; on machine beds bronze or other soft tools should be used for this purpose.

The procedure to be followed in extinguishing magnesium fires on wood floors (or on wet ground) is as follows: Apply a small amount of pitch over the fire to reduce the heat and glare. Then spread a layer of pitch approximately 1 inch thick on the floor alongside the fire and carefully transfer the burning mass onto the pitch layer with a shovel or hoe. Finally, cover the entire surface of the fire with more pitch and also scrape away any burning particles or embers from the floor at the initial location of the fire. If, by the time the fire is discovered, the wood floor is badly scorched or burning, then, after the above steps are taken, apply a fine spray of water (not a strong stream) to the burning wood to prevent the spread of the wood fire. Insofar as possible, in shops with wood floors where magnesium is being processed or handled, care should be taken that metal pans are kept under machine beds so that accumulation of magnesium chips or powder collect in the pans and not on the floor.

Magnesium Incendiary Bombs

The most common type of incendiary bomb dropped on residential areas in England during the present war has been the so-called "electron" bomb, weighing 2.2 pounds. This consists essentially of a cylindrical magnesium alloy tube 9 inches long, 2 inches outside diameter, and 1.2 inches inside diameter, with sheet iron tail fins about 4 inches long to act as stabilizers. The tube is filled with thermit (mixture of aluminum and iron oxide) and an igniting charge; the nose of the bomb contains a fuse. When the bomb strikes an object the igniting charge is set off and ignites the thermit, which burns fiercely for nearly one minute at a temperature of approximately 5000° F. This reaction supplies its own oxygen and nothing can be done to stop it. During this time the magnesium tube ignites; if nothing is done this burning continues for about 15 minutes at a temperature of approximately 3000° F. Magnesium requires oxygen from the surroundings to support its combustion, and if the bomb can be sealed off from the air it will stop burning.

In England two general methods are followed in dealing with magnesium incendiary bombs. In one method a layer of dry sand is shoveled over the bomb with a long-handled shovel, then the bomb is shoveled or scooped into a bucket containing several inches of sand and covered with more sand. This bucket is then carefully removed from the building as soon as possible. In the second method, generally used when the bomb cannot be approached for some reason, a spray (not jet) of water is directed on the burning bomb and on the surroundings. This causes the bomb to burn out very rapidly and also prevents the spread of fire.

To extinguish small magnesium incendiary bombs on dry ground, on concrete or on metal surfaces by the use of pitch, spread (do not throw) a layer of pitch over the bomb with a long-handled scoop or shovel. This will quickly seal the bomb and stop its burning. To attack fires started by the bomb, water should be used in the usual manner, but care should be taken to keep water from reaching the bomb.

To deal with a burning bomb on a wood floor, as in an attic, the procedure should be as follows: Cover the bomb with some pitch to stop the heat and glare; then spread a layer of pitch on the floor near the bomb and roll the bomb onto this layer and cover with more pitch. With this method the bomb is completely extinguished and it is not necessary to remove it until convenient.

Occasionally small incendiary bombs contain mild explosive charges that go off as the bomb burns. To guard against injury from such fragments, as well as against small fragments that are thrown off an ordinary incendiary bomb during the initial ignition, it is best not to approach the bomb too closely but to use long-handled shovels or scoops. The use of fire protective clothing and dark goggles is likewise advised.

Further details of the methods of extinguishing magnesium fires and incendiary bombs with hard coal-tar pitch and information on the nature of this material are contained in a forthcoming Bureau of Mines publication entitled "Extinguishing Magnesium Fires and Incendiary Bombs with Hard Coal Tar Pitch," by H. R. Brown, Irving Hartmann, and John Nagy. The principal producers of the type of pitch recommended for extinguishing magnesium fires are the Barrett Company, 40 Rector Street, New York, N. Y.; the Koppers Company, Tar and Chemical Division, Pittsburgh, Pa.; and the Reilly Tar and Chemical Corporation, Indianapolis, Ind.

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*From a Bulletin issued by the U. S. Bureau of Mines.

[1]In case of very large fires in magnesium storage sheds the best that can be done is to remove carefully as much of the unburned magnesium from the fire as is possible with safety; then construct a barricade of sand or other noncombustible material around the fire and protect adjacent buildings by spraying water on them. In this operation great care must be taken that no water reaches the burning magnesium.

NOTE: (a) It should not be construed that the procedure outlined above is the only one for dealing with incendiary bombs. British publications and reports of American civilian defense authorities describe many other methods for combating the hazard from these incendiaries. It is believed, however, that the use of pitch is the best means by which the burning of magnesium incendiary bombs can actually be stopped.

(b) Pitch is not effective, nor is any other material, for extinguishing thermit bombs, as the thermit reaction supplies its own oxygen, and pitch should not be used for this purpose.

Four-Alarm Fire Sweeps Large Rooming House

A graduate nurse was burned to death, another nurse died from burns and injuries received in jumping from a third-story window to the lawn below and seven others were burned and injured when a spectacular early morning fire swept through a large rooming house located at 4744 Friendship Avenue

General View of the Fire Showing the Burning Buildings Illuminated by Flood Lights, in Addition to the Flames

in Pittsburgh, Pa., on January 3rd. The fire completely burned out one house and extended to another large brick rooming house, badly damaging it before the firemen from eleven fire companies succeeded in bringing the fire under control.

Spectacular rescues by firemen and desperate leaps for life dramatized the scene, as the flames roared through the old-fashioned open stairwell structure from the first floor to the roof, trapping a number of the sleeping roomers before they fully realized the building was on fire.

When Engine Companies 6 and 14 and Truck Company 14, answering the first alarm, arrived on the scene in command of Acting Battalion Chief Bernard J. Cavanaugh, the entire structure was a mass of flames, which were rolling out of all the windows, the large vestibule doors and across the wide front porch. The first attention of the firemen as they arrived was to get the occupants out of the burning structure and the building next door.

As soon as Battalion Chief Cavanaugh arrived on the scene, he immediately sent in the second alarm at 4:33 A.M., which was followed by the third at 4:35 and the fourth at 4:42 A.M. The fourth alarm was quickly followed by a special call for extra apparatus.

Both of the burned buildings were of brick and wooden joisted construction, each three stories in height, and containing from ten to fourteen rooms. All of the buildings are separated by six-foot areaways, with a large lawn in front and a twenty-foot alley in the rear.

The extreme cold weather, with the temperature about ten degrees below zero, and a brisk cold wind gave the firemen a tough job, the spray from the streams covering the streets, lawns and nearby fire apparatus with a heavy coating of ice.

Neither of the burned buildings were equipped with fire escapes of any kind. The duration of the fire was five hours, although a detail of firemen were left at the ruins for most of the day to guard against any further outbreak of the fire.

WILLIAM E. PATTERSON

Aerial Truck Built from Horse-Drawn Vehicle

Because of the need for making every piece of apparatus ready for immediate and safe service, the Asbury Park, N. J., Fire Department under the direction of Chief William S. Taggart, have converted their old horse-drawn aerial truck into a second alarm truck.

The truck which started out as a horse-drawn American-LaFrance aerial, was purchased in 1909 for the Independent Ladder Company, then volunteer. In 1914 it was changed to a Christie drive, and a new ladder was placed on it in 1921.

In 1931, when the new eighty-five foot American-LaFrance was purchased by the city, the truck was put in reserve.

In 1941, because of the emergency, Chief William S. Taggert and his men worked continually to recondition the ladders. The trailer was rebuilt and a commercial tractor was placed under the lift. The rebuilt truck is now in service as a second alarm engine, and the department now has two aerial trucks.

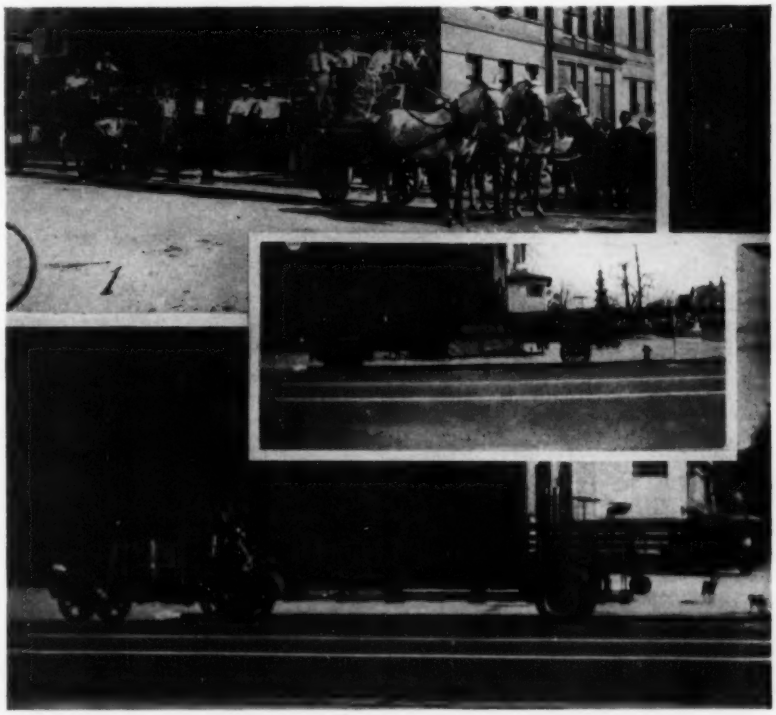
Cambria Firemen Aid in Rescue

When the tanker Montebello was torpedoed by a submarine off the coast of California, the Cambria Fire Department, under the leadership of Chief Jack Freebody, were instrumental in rescuing six of the survivors.

The six who had left the tanker in a lifeboat were forced to leave it also when it crashed into the shore rock. There was a wild scramble by four of the men. Two of them made the shore after a drenching. Two others floundered in the sea but managed to hang onto the lines thrown them by the Fire Department. Chief Jack Freebody, struggling to help one of the victims out of the boiling sea, was swept off the rock and considerably bashed up before the two were hauled in. A sixth who stayed with the boat until it came to rest momentarily on a rock climbed on it and remained there until he had rested. He was able to climb the bluff to join his fellow crew members without aid.

New Station for Newport News

A grant of $49,350 was made to the city of Newport News, Virginia, as a Defense Public Works project, for the construction of a new two-door fire station and the purchase of fire fighting equipment. It is essential that present facilities be supplemented in order to provide protection for government property as well as that of workers in the area brought in because of defense activities. The estimated cost of the project is $65,800.



Three Stages of the Asbury Park Aerial Truck

Photograph No. 1 shows the truck when it was first purchased. No. 2 shows it when it was first motorized with the Christie tractor arrangement placed on the front. No. 3 shows truck as it is today.

Activities of the Fort Collins Fire Department

The Fire Department of Fort Collins, Colo., under the direction of Chief T. P. Treadwell, have assembled a fire defense unit trailer.

The trailer is part of an old truck that was originally built for the purpose of carrying supplies for fire alarm system repairs and maintenance. However, the need for an auxiliary fire defense unit arose and the trailer was rebuilt for this purpose.

The portable pump was picked up from the Water Department and the other accessories were accumulations from the department that had been replaced by better accessories but which serve very well on the auxiliary unit.

The unit is mounted on a two-wheel box trailer. It is equipped with 800 feet of 2½-inch hose, 500 feet of 1½-inch hose, a 20-foot piece of suction hose, a foam generator and foam powder for fighting oil fires, deluge gun which will receive four streams of water at one time and discharge 1,100 gallons a minute, flood light, two 2½-gallons acid extinguishers, and a motor driven pump which can be used on the trailer or dismounted and placed in a stream.

Fire Defense Trailer Built by Fort Collins Fire Department

Auxiliary Corps Being Formed

Chief Treadwell already has under way the organization of an auxiliary fire fighting force to supplement the work of the fire department, with a total of forty employees of city departments enrolled.

Fort Collins also carries on a very extensive fire prevention program. It received third place in the contest recently held by the National Board of Fire Underwriters for its fire prevention activities.

Last year Chief Treadwell and his men assisted in conducting a fire school at Estes Park, which members of the National Park Service and members of the Estes Park Volunteer Fire Department attended.

New York Preparing for Emergencies

Mayor LaGuardia of New York City has ordered an hour's daily drill for every air warden in the city. The enrollment of air wardens began in June and 115,000 people signed up. Since the Japanese attack on Pearl Harbor, the enrolllment has risen by 50,000 more. The air raid wardens have been organized into zones with a population of 50,000; sectors with a population of 5,000 and posts with a population of 500.

Each zone needs three zone wardens; each sector needs six sector wardens and each post also needs six post wardens. The wardens have been instructed in their duties by the Police Department and must know every building on their posts together with the water and gas mains, the police call boxes, the fire alarms and other vital points.

Since the organization of the auxiliary fire corps last July, 25,000 men have been trained by the Fire Department to fight fires, and 36,000 are now receiving instruction.

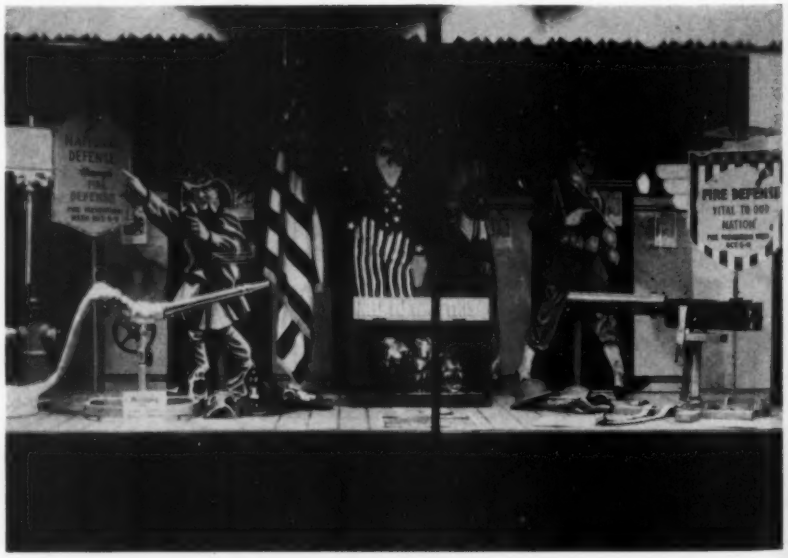
A flexible arrangement has been worked out with towns and cities within a fifty-mile radius of New York, under which apparatus can be rushed from the city to its neighbors or vice versa as conditions might make desirable.

New Pumper for Santa Fe

A new American-La-France pumper was recently added to the equipment of the Santa Fe, N. M., Fire Department. This new truck, the fourth to be added to the department's motor equipment, has a pumping capacity of 500 gallons a minute and carries 1,200 feet of 2½-inch hose in addition to auxiliary equipment. The ladder carried is an all-aluminum, 45-foot, 3-fly extension. The truck also carries a booster pump with a 100-gallon tank for use on small fires and in districts away from fire hydrants.

Santa Fe, which is one of the older cities in the United States, was settled by the Spanish in 1610. Its volunteer fire department was formed in 1922 following a disastrous blaze that destroyed the old De Vargas hotel. Many of the charter members are still active in the organization.

The department is of little expense to the city in comparison to other volunteer departments over the state. The trucks and equipment are purchased from funds allotted the department from the two per cent tax on insurance premiums. The city is alloted $2,000 annually for fire protection. The entire payroll of the department is two paid drivers who care for the fire equipment.



Fire Prevention Display in Fort Collins

This is one of a number of store windows which carried exhibits during Fire Prevention Week. All the figures in this window were made by Captain Glen Rumley and his men.

T. G. Fisher Now Chief at Norwood, Ohio

Captain Thomas G. Fisher of the Norwood, Ohio, Fire Department was recently elevated to the position of Chief.

Chief Thomas G. Fisher

Chief Fisher was a member of the Cincinnati Fire Department for fourteen years, the last five of which he served as lieutenant. In 1920 he came to the Norwood Department and was named lieutenant in 1924 and captain in 1931.

Due to the death of Chief James T. Doherty, who died last December, Chief Fisher has served as Acting Chief. In a competitive examination held on September 4, he rated as number one.

Baltimore Department Kept Busy

Additional alarm fires kept the Baltimore, Md., Fire Department on the jump late last Fall. During one week, six large fires were fought, three of them burning at the same time.

The first of the chain started when No. 23 Engine responded to a 'phone call and found a stubborn blaze in the basement of an ancient five-story building in the center of Baltimore. Three alarms were sounded and the fire was confined to the basement. Deputy Chief George Otter was overcome by illuminating gas.

While this fire was burning, four alarms were sounded for a fire in the Union Stockyards, in which a large frame structure was destroyed. A few minutes later, three alarms were sounded for a fire in a factory about two miles distant from the four alarm fire. The three additional alarm fires kept a large part of the city stirred up, as fire sirens were sounding almost constantly for a three hour period. Over fifty fire companies responded to the various blazes.

One woman burned to death, and 95 were saved, when an early morning blaze roared through a Baltimore apartment house on October 25. A passerby saw flames shooting from windows of the Hamilton Apts., 801 Eutaw St., as the first residents to awaken crowded the fire escapes, or clung to window ledges. An alarm was sounded promptly and brought three pumpers and two aerial trucks to the scene. All fire fighting was suspended as rescue operations began. First firemen at the four-story building said the fire was rolling from upper floors, and that every window had a terrified occupant, two of whom jumped and suffered injuries. After rescue operations had ceased, a water curtain was thrown up to prevent spread of the fire to another wing of the building, while other streams were directed into the blazing wing.

The fire was confined to the wing in which it originated. It was declared to have started in a first floor storeroom, and to have traveled up an open stairwell and mushroomed on the fourth floor. A dozen or more residents were rescued by ladders, the remainder were assisted down fire escapes.

Twenty-three engines, five aerial trucks, and a water tower responded to the six alarms on this fire. The alarms were sounded at intervals from 3:44 A.M., to 4:09 A.M. Chief Howard Travers commanded the companies on the scene. Ten second-line pumpers and two second-line trucks were manned and placed in service in twelve of the vacated fire houses.

A four-alarm fire swept through two buildings in the west end of Baltimore the following afternoon. Two boys set fire to the Plymouth Wall Paper Co. on Baltimore St., and the fire spread to an adjoining furniture warehouse. No. 38 Engine responded from their quarters across the street and pulled the first of four alarms at 1:32 P.M. The second sounded at 1:33; the third at 1:37; and the fourth at 1:47 P.M. A special call was then sounded for two additional pumpers.

The two buildings, often declared unsafe by officials, offered no hindrance to the spread of the flames. The plate glass window of one building blew out across the street and the fire went up through the three stories of wallpaper storage. It spread into the adjoining building through a large opening in the wall and soon was roaring in the two top floors of that building. Heavy streams were called into use and the fire was stopped after a two hour battle.

The sixth additional alarm fire of the week occurred in a hat store in the center of the city, and across the street from the quarters of Engine 23 and the Deputy Chief of the First Division. Two alarms were sounded for this blaze. Officials expect a number of fatal fires in Baltimore this winter, as the boom condition in war industries has badly overcrowded apartment and boarding houses.

OTIS SMITH

Scenes at Two of Baltimore's Additional Alarm Fires

Upper: Hamilton Apartments after the fire. Point where ladder rests against wall shows where spread of fire was stopped. Lower: General view of Plymouth Wall Paper Company showing Engine 23 using pipe, while ladder, pipe and a water tower have been placed in position, but are not yet operating.

Mulligan Chief at Sacramento

As announced in the January issue of FIRE ENGINEERING, Terence Mulligan

Chief Terence Mulligan

was appointed Chief of the Sacramento, Calif., Fire Department. Herewith is a likeness of him.

A Major Disaster Unit for Cincinnati

The Seagrave Corporation of Columbus, Ohio, is building a major disaster unit for the Cincinnati Fire Department. It possesses an innovation for the first time used in the fire service. This consists of a compressed air unit, including an air compressor and storage tank.

Among the equipment planned for the new unit, in addition to the compressor and storage tank, are a compressed air operator's winch, located at the front end of the unit, having a capacity of 2,000 pounds at eighty pounds air pressure, the winch being equipped with 400 feet of ½-inch cable; air purifier for purifying air for air helmet; a Lamb airfoil smoke ejector; air helmet; compressed air operated saw, with twelve-inch blade; pneumatic pavement breakers and pneumatic jack hammers.

The air compressor on the unit has a capacity of 315 cubic feet per minute at 100 pounds pressure. The air receiver tank is fourteen inches in diameter by thirty-six inches in length.

The apparatus will also carry a complete assortment of other emergency tools and equipment.

The sketch herewith shows the layout of the equipment on the unit.

The apparatus was designed by Edward Lamb of San Francisco, Calif.

Scranton Buildings Gutted by Three-Alarm Blaze

A three-alarm fire of undetermined origin, causing damage estimated at more than $100,000, swept through buildings in the 200 block of North Main Avenue in West Scranton on January 6th, and threatened an entire block of business houses before firemen succeeded in bringing it under control after battling for several hours.

Occupants of second-floor apartments, including two convalescents who only recently had returned from hospitals, were rescued from the burning buildings.

The two-story building which housed the Thomas Music Store and a hardware store on the first floor, was completely destroyed.

The adjoining building was gutted and almost a total loss. It was occupied by a beauty shop, a food market and a meat market, with apartments on the second floor.

Heavy smoke and water damage was suffered in two adjoining buildings, but firemen kept the fire from spreading into them.

Two firemen were injured. They were Assistant Chief Charles Goerlitz who suffered injuries to his back and ribs in a fall down the icy rear stairs of one of the buildings, and Ellsworth Morgan, a fireman, who tumbled from a ladder when the front of the Thomas building bulged out as the roof fell through.

It was a virtual baptism under fire for Chief Edmund B. Lewis who had only been sworn in as Chief the day before.

Meinheit Chief at Berkeley

Deputy Chief William Meinheit has succeeded John S. Eichelberger who

Chief William Meinheit

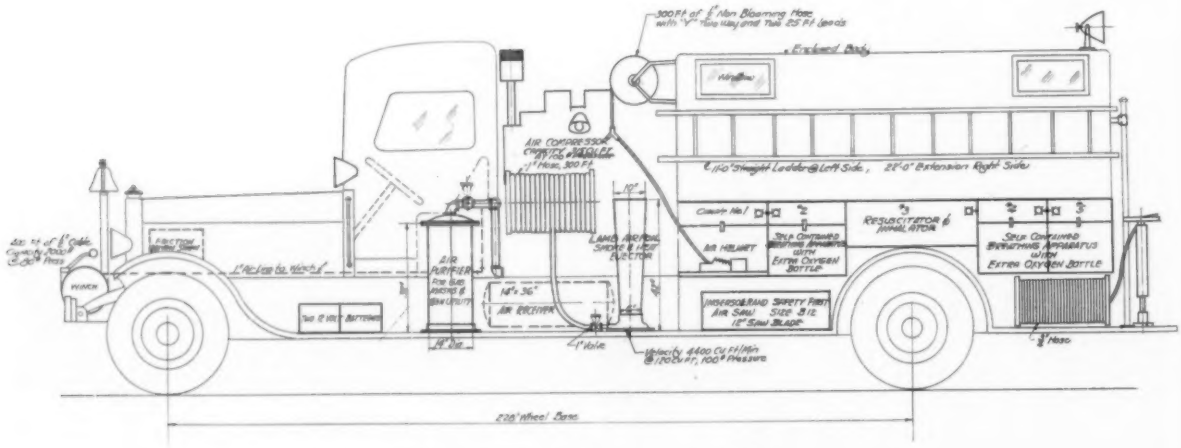
retired after thirty-three years' service as Chief of the Berkeley, Calif., Fire Department.

Chief Meinheit has been a member of the department since 1914. He served in the last war. He has served as hoseman, fire alarm operator, chief operator, lieutenant, department secretary, captain in charge of fire prevention and compiler of the existing Fire Prevention Code, assistant chief for eleven years, deputy chief for three years, before becoming Chief of the Department.

Dubuque Fire Injures Three

Fire Chief W. L. Ryan of the Dubuque, Ia., Fire Department and two of his men were overcome by smoke and escaping gas while fighting fire in the basement of a store in the downtown section of the city.

Fire broke out in baled paper in a stockroom and was confined to the basement in a five-hour battle.



Cross-section View of Major Disaster Truck

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Relief Valves on Hydrants

To the Editor:

When should a relief valve be used on a fire hydrant?

Is it modern practice to use such valves on hydrants? L.K.W.

Answer: Where high pressure hydrant streams are being used, it is good practice to use a pressure relief valve.

For example, if a shut-off nozzle at the end of the line of hose were closed quickly, while the line were operating under the full main pressure, there might be danger of rupturing the main, or some connection to it, by the water hammer created through quick closing of the shut-off nozzle.

There is just as much reason for using a relief valve at a hydrant supplying a hydrant line, and where the pressure in the system is high, as there is in using a pressure relief valve on a pumper.

Static Pressure

To the Editor:

"A" is a container 10 feet in height and 10 x 10 ft. in cross section, and with a 10-foot base. "B" is also 10 feet high with a 10 foot base, but the cross section of the vertical part of the portion is only 1-inch square.

Is the water pressure the same on the bases of both containers, namely, 4.34 pounds per square inch due to the same head of water?

However, I think that the pressure in "B" container should be considerably less than "A" because I understand that static pressure is due directly to the pressure created by the weight of water. In "B" the weight of the 10′ x 1″ x 1″ column of water is equally distributed along the 10-foot base. This should greatly reduce the pressure below the 4.34 pounds per square inch of "A" container. F. L.

Answer: The pressure per square inch on the bottom of container "A" is identical with that of container "B" as long as the depth of water in each is the same. The old rule that "Pressure applied to a confined fluid at rest is transmitted with the same intensity in all directions," holds in this case.

Weight should not be confused with pressure. The weight of the water in "A" is naturally much greater than that of the water in "B", but the pressure per square inch at the base of each is the same.

Do you know that it is theoretically possible to burst a beer key with a pint of water, provided the keg is completely filled with water and a small pipe is extended upward sufficiently far. Assume that the pipe was 200 feet high, and that the pint of water just filled it. This elevation of water would create a pressure on every inch of the interior of the keg of approximately 86.8 pounds. Such a pressure naturally would burst the keg. And yet a pint of water weighs approximately but two pounds.

Comparing Capacities of Lines

To the Editor:

Bulletin 62 issued by the National Board of Fire Underwriters contains some statements relative to the carrying capacity of 2½-inch hose that are rather confusing to me. It states as follows:

1. It would take 24 lines of ¾-inch hose to deliver the same quantity of water as one line of 2½-inch.

2. It would take 11 lines of 1-inch hose to deliver the same quantity of water as one line of 2½-inch hose.

3. It would take 3.9 lines of 1½-inch hose to deliver the same quantity of water as one line of 2½-inch.

I believe it should be 11 instead of 24 for the ¾-inch; 6.25 instead of 11 for the 1-inch and 2.8 instead of 3.9 for the 1½-inch. W.A.W.

Answer: Apparently the author of the Underwriters' Bulletin to which you refer made his comparison on the basis of friction loss in lines rather than on the basis of the cross-section area of the hose.

If hose lines are fairly near to each other in diameter, a comparison on the basis of cross-section area is satisfactory.

However, if the lines vary widely in diameter, then a comparison on the basis of friction loss gives much better results.

For example, in the first comparison, where it is stated that twenty-four lines of ¾-inch hose will deliver the same quantity of water as one line of 2½-inch, we may make the following observations. A ¾-inch line of hose has a friction loss of 50 pounds per 100 feet for a flow of 20 gallons per minute; a 2½-inch line of hose has a friction loss of 50 pounds per 100 feet for a flow of 475 gallons per minute.

475 ÷ 20 gives 24, which is the figure used in the Underwriters' Bulletin on fire hose.

Calculations for 1-inch and 1½-inch hose as compared with 2½-inch, gives results quite close to those offered by the Underwriters' Bulletin. Therefore, it is evident that they have compared the lines on the basis of friction loss rather than on cross-section area.

When Results Differ

To the Editor:

In Example 138 on Pages 113, 114 and 115 of "Fire Service Hydraulics" please explain the discrepancy between the average nozzle pressure of 45.8 pounds on Page 114 and the average as obtained from the two nozzle pressures of 44.7 pounds and 36.8 pounds on Page 115. Another question deals with the values of "K" on Page 68, which is either more or less than the value obtained by using the formula D^4 divided by 10. The third question refers to problem 107 on Page 83 and asks why the nozzle pressure plus the friction loss does not equal the engine pressure.

No doubt there is a reason for these discrepancies, but I have not been able to find the reason in the book.

In trying to explain the proper procedure for pumpers in relay and using the information as given on Page 139, I was asked the question "How is the engine pressure as specified determined in the first place when the pressure is the governing factor in the placement of the second pumper in the relay?" Is the pumping pressure as defined on Page 139 a matter of "guess" or is it determined by a field procedure in order to know when to use 150 pounds or 250 pounds? Of course, after the engine pressure has been decided upon, then the formula for placement of the second pumper can be easily worked out. I ventured a guess that in order to obtain these pumping pressures you would take the pressure that would be required by a single engine to pump the whole layout and then divide the obtained pumping pressure by two and then use the results as a basis for determining the placement of the second pumper. Take Example 156 on Page 140, the required pumping pressure for a single engine would have been 311 pounds, which, divided by two, would give you 150 pounds, and then use the procedure as defined on Page 139. E.S.

Answer: The dicrepancies between the average nozzle pressure of 45.9 pounds on page 114 and the average as obtained from the two nozzle pressures of 44.7 pounds and 36.8 on page 115, is due to the fact that in the second calculation, one line is shorter than the other. As one of the two lines is shortened, the flow increases therein, and the friction loss increases per hundred foot not directly as the flow but as the square of the flow. A drop in pressure in the short line will therefore be greater than its length might indicate. Decreased nozzle pressure on the line results.

Conversely, with increased length of line, the friction loss per hundred feet drops and we have a greater nozzle pressure than we might expect.

Thus the average of the two nozzle pressures so calculated may not be the average of the two nozzle pressures originally given.

In finding the value of "K" the formula gives only approximate results. The table of values of "K" is based upon actual flow tests. The formula, on the other hand, is intended merely for use where a table of values of "K" is not available.

In solving for open butt pressures, you will frequently find, as noted in the problem to which you refer, that the open butt pressure plus friction loss does not give engine pressure.

However, in the problems you cite the error is actually less than five per cent. For example, if we take five per cent increase in open butt pressure, we will have pressure of 3.08 pounds approximately. At this pressure the discharge will be approximately 293 gallons per minute, and the friction loss per 100 feet of 2½-inch hose at this flow, 20.325 pounds. The friction loss per 1,000 feet will be 203.25 pounds. Adding to this the open butt pressure we'll have an engine pressure of 206.33 pounds.

Thus, you will note, the error is less than five per cent, as we used an increase in nozzle pressure of five per cent in the above calculations. Such a small error speaks well for the accuracy of this empirical formula.

In determining the engine pressure when figuring the location of pumpers in a relay line, it is up to the student to estimate whether or not the pressure will be within the 120, 150, etc., pound range. However, your method is about as good as any in arriving at this figure.

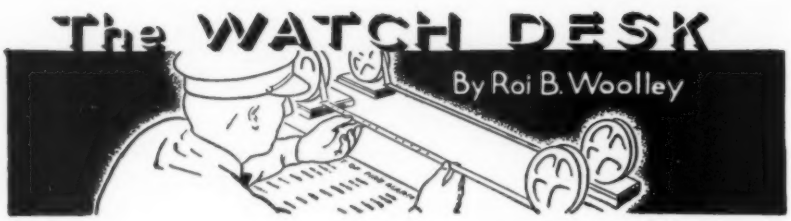
Ten Burn to Death in St. Louis Bus

Ten persons were burned to death and twenty-two others were injured in the flaming wreckage of a bus in St. Louis, Mo., recently.

The Public Service Company bus and an automobile collided. The bus carreened off a parked car and, hurtling the sidewalk, smashed through a 200-gallon fuel oil storage tank which exploded, enveloping the bus in flames as it plunged into the brick wall of a tenement.

Terrorized passengers stampeded for the exits. The rear door jammed after a few of the passengers escaped and the others couldn't open it.

Two witnesses rescued many of the panic-stricken passengers who were attempting to fight their way from the blazing bus. They broke several windows and pulled seven persons to safety.



Our inquiring reporter overhauls the firemanic news of the day

Rekindle—or Busy Mrs. Mahony

Mrs. Ralph Mahony's house near Alexandria (Ind.) caught fire from a bad flue. She put it out (or thought she did) with a garden hose, and went to town to file a claim with her fire insurance agent. The agent and a carpenter went out to survey the damage and found the house afire again "from a bad flue." Mrs. Mahony put this out with a garden hose. The agent allowed the claim. We dunno whether or not the flue was repaired.

* * *

Blocked Fire Truck—Soaked $25

W. S. Glotfelty, Agency (Ia.), was fined $25 by Police Judge A. R. Swartz, after being found guilty of refusing to allow an emergency vehicle to pass him on highway. Ottumwa (Ia.) firemen said Glotfelty refused to let one of their fire engines pass as they were en route to the Lester Bennet home east of city, and home burned to ground. Glotty, you got off cheap!

* * *

Hot Off the Ticker

In Spartanburg (S. C.) the local water wagon caught fire while it was doing its early morning street flushing. The Brothers were called and doused the blaze with more water. . . . Firemen of Tacoma (Wash.) raced to a signal station to find water gushing out of the fire alarm box. A two inch rain had caused a storm sewer to back up through a conduit, which shorted alarm, called the Braves. . . . When a runaway motor cycle crashed into Box 338 at Boston, 30 signal stations (boxes, if you prefer) were put out of order. . . . Dorothy Van Dyke, 19 Los Angeles (Cal.) wondered whether there was any gasoline in her auto's tank. She used lighted match to find out. She went to hospital with 40 per cent body burns. Her husband Richard, who was standing nearby also was burned. . . . Tom Magner sends us item about "Hot Love in Love Lane" from Hartford, where within two hours, two alarms for different fires were received from Love Lane, that city. . . . Firemen of Des Moine's $200,000 central fire station used artificial respiration on 4-month old spider monkey in unsuccessful effort to save its life. Monkey accidentally hanged itself by its own collar and chain. . . . Getting his fingers burned while changing electric light bulb, gave Dawn Hostetler, 25, Clear Lake (Ia.), idea for arson, which resulted in destruction of family dwelling. He wrapped several oily rags around bulb, turned on light and beat it, but law caught up with him. . . . National Board of Fire Underwriters, reporting on nation's fire deaths, says children are chief victims—1,673 under five years of age being burned to death annually. . . . In Sao Paulo (Brazil) a Japanese poured gasoline over sleeping wife and 3 small children, set them afire, then barred door of house and stood outside while they burned to death. What you might expect of that race! . . . They're getting hard-boiled in New Jersey. Stanley S. Backner, 39, was charged with responsibility for a 25,000-acre blaze at Taunton Lakes (N. J.) and ordered to pay fines totaling $600. . . . "Observant Citizen" of Boston wants members of Boston F.D. to "smarten up" with new hats, "similar to those worn by police and elevated employees". . . . An accidental "building alarm" brought H & L 24, N.Y.F.D. and other companies to a structure where sharp-eyed officers discovered about 80 gallons of rubber cement stored in violation of fire prevention ordinance. . . . Toledo (O.) fire department shops have turned out a "crash wagon" for use at Municipal Airport. An old hose truck was entirely rebuilt at cost of $650. . . . Levi L. Rogers, president N .Y. State Volunteer Firemen's Association and member of Posdam (N. Y.) F.D. doused a fire in an auto before fellow firemen arrived. He was nearby when whistle sounded, grabbed extinguisher in car and did his stuff. . . . On that subject, D. R. Witham, North Bergen (N. J.) writing in New York City papers after several people were burned to death in car accident believes that every motor vehicle should be compelled by law to carry some approved type of fire extinguisher. . . . Captain O. V. Ayres, Memphis (Tenn.) F.D. jumped out of bed to answer an alarm, snapped into turnout, and grabbed sliding pole and next thing he knew he found himself sitting on bottom floor with both legs broken. He explained later that both his arms had been asleep. . . . Mrs. Clara Fitzgibbons, 40, Buffalo (N. Y.) died when can of "exterminating fluid" exploded, igniting her clothes.

* * *

The Month's Orchids

This month's bouquets to Asst. Supt. Wm. Cashman and Capt. Wm. Van Buskirk, New York Fire Patrol, for their alertness in apprehending Otto F. Muller, 21, and starting chain of events which led to his confession for setting a fire in old tenement flat at 696 Tenth Ave., New York City. Captain Van Buskirk noticed Muller in leather jacket, very busy around the fire, recollected he'd seen him at other fires in vicinity and reported his sus-

picions to Asst. Supt. Cashman, who in turn summoned police. Fire resulted in death of bank-shy Charles Vollner, 78 and discovery of $8,507 in cash which he had hidden about his flat. Quick work by firemen summoned on 2-alarms, saved Mrs. Vollner. Praise, also, to Fireman Wm. Howe who discovered and reported the cash.

* * *

Peace Hath Its Deaths No Less Than War—How They're Dying Along the Fire Front

RUSHVILLE, IND. Nine persons burned to death, nine injured, two critically, when Cinc-to-Chi bus struck culvert after sideswiping auto, burst into flames. Driver of auto, Paul Connell, 39, charged with drunken driving. Bus was old model and exploding tank enveloped passengers in front seats in flames.

CLAYTON, ALA. Twenty-two died following bus crash of Montgomery-Birmingham passenger bus. Driver, W. P. Alton, heroically tried to rescue passengers, rereceived fatal burns. Bus struck concrete railing of a bridge, smashed up, took fire and burned. Many seriously injured.

MONTCLAIR, N. J. Believed caused by oil stove explosion, at least 12 negroes burned to death in fire that swept through flimsy two-and-a-half-story shack at Walnut Place (N. J.) near here.

AMITYVILLE, L. I. Six reported to have died as result of fire in a 54 year old sanatarium of Brunswick Home near here. Many rescued. Fire started with explosion "near the furnace", witnesses said.

NEW YORK CITY: Fast work by the Brothers under direction of acting Battalion chief Toomey held a fire on the new Minesweeper YMS 39 at Jacob's shipyard, City Island, from assuming serious proportions. Short circuit reported the cause.

SANDUSKY, O.: Following an explosion heard for distance of many miles from the $40,000,000 Plum Brook Ordnance Plant, an undetermined number of men were injured, but no explanation of the explosion, its cause or accurate extent of damage be secured.

POWHATAN, O.: Fire swept the No. 1 mine of Powhatan Mining Co. apparently killing three, while 163 escaped unharmed. Fire broke out only one day after swastika were discovered painted on the walls of the mine. A 36-year-old Polish miner was taken into custody.

SEWARD, ALASKA.: Four hundred persons made homeless, $1,000,000 worth of property (much of it government) destroyed in fire that is supposed to have started in a barber shop heater and raged out of control for 8 hours. Dynamite and tractors were used to demolish buildings in path of flames. Firemen, soldiers, from Fort Raymond, and civilians fought fire.

SAN DIEGO, CAL.: An explosion of undetermined origin leveled two buildings within radius of four blocks in East San Diego business district. Soldiers with fixed bayonets went on patrol. Damage put at $30,000, minor injuries to three.

BRAINARD STATION, N. Y.: Two children died of burns when fire destroyed home while their mother was absent. Grownups still go away leaving their children "locked in."

HAVANA, CUBA: Inmates of an asylum, in effort to escape, set fire to building. It burned. Four were killed (some say by gunfire in quelling the riot).

(*Continued on page* 99)

FIRE SWEEPS DORMITORY OF STATE HOSPITAL IN PARSONS

All of 218 Patients Removed. Damage Estimated at $150,000

ONE of the most distastrous fires in the history of Parsons, Kans., destroyed most of the largest building at the State Hospital for Epileptics, used as a dormitory for the most serious cases of women patients, but every one of the 218 patients was removed to safety.

One of the patients confessed to starting the fire which destroyed all but one wing of the three-story ward building. She obtained matches on the way back to the institution from a home parole and set fire to stockings in a clothes closet. Then she ran down stairs calling "fire." The blaze spread quickly and was out of control a few minutes after being discovered at 5:15 P.M.

Scene at Height of Fire in State Hospital

Ruins of State Hospital Building

This is all that was left of the largest building at the State Hospital after the disastrous fire.

Fortunately there was no wind, or nearby buildings would have been greatly endangered by the fire which burned fiercely for three hours and still was smoldering the next morning.

The 218 patients, all except a few of whom were eating supper when the fire was discovered, were removed safely by attendants. Between forty and fifty

patients had to be carried to safety on mattresses. Many of these were permanently bedridden. Many patients came from the building barefooted, other with blankets wrapped around their clothing. Virtually every building of the institution's dozen or so was used as sleeping quarters for the overflow of patients.

Hampered by fifteen degree weather and a lack of sufficient water pressure, Parsons firemen from both companies worked from the time of the alarm until 11 P.M. without anything but short snatches of rest.

Despite the ferocity of the fire, which mushroomed into the attic soon after it was discovered, only very little equipment or clothing was lost. Patients and attendants in second and third-story rooms tossed out mattresses, bedding and clothing. Others, waiting on the ground, hauled them to safety beyond the danger zone.

Firemen under the leadership of Chief E. G. Parsons, were unable to muster more than two streams of water at any one time because of a lack of pressure through the institution's six-inch water main from the city water system.

Most of the walls remained standing, though a large segment of the front wall fell shortly before 8 o'clock. It was apparent at 7 o'clock that all but the new south wing was lost so firemen confined their efforts to preventing a spread of the flames in that direction.

Loss was estimated at between $100,000 and $150,000 by the State Architect.

Maine Chiefs Meet at Waterville

The State Association of Fire Chiefs of Maine held their January meeting at Waterville as guests of the Waterville Fire Department. The meeting was the largest that has ever been held by the Association, nearly two hundred members and guests being present, with every county in the state represented.

Mayor Paul Dundee of Waterville extended the welcome of the city to the visiting chiefs, to which Chief Clifford D. Dennison of Harrison responded. The meeting was presided over by the President, Soloman A. Herman of the S. D. Warren Company of Westbrook. Major L. S. Johnston, Supervisor of Gas and Incendiaries of the Civilian Defense Area with headquarters at Boston, Mass., addressed the morning session on war gases, explaining their action and the treatment of persons gassed. Each gas was taken up and its peculiar characteristics explained so that the type of gas could be determined by odor and action. This was followed by a demonstration of magnesium fires and the methods of controlling them.

At the afternoon session a room in the fire station was used to demonstrate tear gas, the members having a chance to experience the gas in an atmosphere containing approximately one per cent of the gas. This was followed by another talk by Major Johnston, who also explained the warning signals to be used in the event of enemy planes.

A business session followed this program and the applications of new members were received and referred to the Board of Directors.

After a brief talk by Chief Eugene T. Ricker of Saco regarding firemen's training, it was voted to appoint a committee to draw up a resolution to be presented to the Governor requesting that a firemen's training school be established within the state. The following is the resolution adopted.

To His Excellency
Governor Sumner Sewall
Augusta, Maine

The State Association of Fire Chiefs of Maine in executive session in the City of Waterville, January 13, 1942, *by a unanimous vote requests that a firemen's training school be established within the State of Maine.*

Chief Eugene T. Ricker
Chief George R. McCurdy
Chief J. W. Randlette

Following the meeting a banquet was held at the Elmwood Hotel.

The April meeting of the Association will be held in Rumford, Maine.

J. W. Randlette

Racket in Racquette River

This is what happened when a New York Central locomotive and the fire truck of the Racquette River Paper Company met at a crossing north of Potsdam, N. Y. The pumper was en route to a forest fire near Nassaweepie Lake from its station in Unionville, N. Y. The driver Marvin Murray and a rider, Leon Perry, jumped when it was apparent a collision was inevitable. Only injuries were to engineer of locomotive, Ira T. White and fireman W. C. Delmage, who was catapulted from cab. The fire truck was a total loss, only part of its equipment being saved.

Potsdam firemen under First Assistant Chief Ralph Johnson extinguished the fire started by gasoline from the punctured truck tank. It took two huge main line wrecking cranes several hours to lift wrecked locomotive off remnants of pumper.

Roi B. Woolley

Boarding House Fire Fatal to Two

One woman was killed in jumping from the top floor of a blazing four-story boarding house in Newark, N. J., another was critically burned and a third lodger was burned to death in the fire. Several firemen were injured.

Firemen, who had just brought under control a three-alarm fire after three hours' work, were sent to the three-alarm fire in the boarding house at 4:45 a.m. without having time to chop inches of ice from their apparatus.

A passing motorist had seen the blaze and warned some of the tenants, but the fire had mushroomed up a back stairway from the basement and trapped ten lodgers on the top floor.

A number of the boarders trapped in the building jumped into life nets, while others escaped by making their way to a corner of the building and jumping to the roof of an adjoining three-story building. One tenant, who lived in a penthouse on the top of the boarding house, was found dead in the debris after the fire had been extinguished.

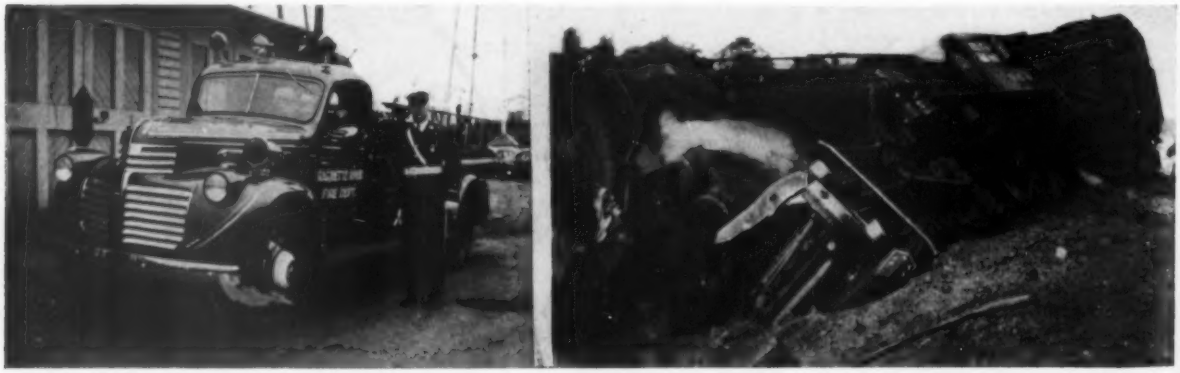
British Fire Service Not Nationalized

As previously stated in Fire Engineering the British Fire Service is not nationalized. It is state-controlled.

The British Government pays twenty-five per cent towards its cost, and supplies the apparatus.

Local authorities pay seventy-five per cent of the cost, own the fire stations, but have no voice in the control of the service.

They share equally with the Government the cost of the police, medical and educational services, the principal officers of which report direct to the appropriate committees of the local authorities.



Photos by Sanford D. Dewey

Left: The Racquette River Pumper Before Its Fatal Crash. Right: The Wrecked Fire Pumper

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

FIRE ALARM SYSTEMS IN PLACES OF PUBLIC ASSEMBLY

BECAUSE of the life hazard, should a fire occur and a panic follow, a number of cities have provided for fire alarm boxes in schools, theatres and other places of public assembly. Most of the Chiefs and Superintendents of Fire Alarms reporting favor an auxiliary system in such buildings. The system is linked to a master box, which in turn, connects up with fire alarm headquarters. They report several instances where the installation of boxes within buildings has prevented the fire from making great headway due to the fact that the department responded directly to the scene of the fire.

Others reporting feel that there is less chance for trouble on fire alarm circuits if they are in no way connected to the private alarm system. If a fire occurs in a building with such a system, the whole alarm system is apt to be put out of commission.

The problem in full appears in the box on this page, while in the box on the following page is the problem that will be discussed in the following issue.

HERE IS THE PROBLEM

1. Do you require fire alarm boxes at schools, theatres, and other places of public assembly?

2. Are such boxes connected to alarm systems of the buildings, or are they independent of these systems?

3. If such boxes are not connected to the building alarm systems, do you believe they should be?

4. In your opinion, what are the advantages or disadvantages of interconnection of such private systems to the municipal systems through master boxes?

Discussion of the Subject

E. C. Daunter, Chief, Jackson, Mich.: We have our own system in our three main hospitals and in two of our largest schools and we encourage it in all public buildings and manufacturing plants. We prefer to have a master box and an auxiliary system installed and maintained by our electricians and connected to our own system. This, in my opinion, eliminates any chance of mistakes which very often occur when a private system is used for fire alarms and watchman service.

Anthony J. Mullaney, Chief Fire Marshal, Chicago, Ill.: The City Ordinance provides that fire alarm boxes shall be installed in front of all schools, theatres, and other places of public assembly. They are a part of the municipal fire alarm system.

In my opinion, signals from all private fire alarm boxes should be received through an authorized central fire alarm station and subsequently relayed to the municipally operated fire alarm system.

Robert McGuire, Gary, Ind.: We have an obsolete fire alarm system, but in our recommendations for a modern system, we have specified the location of fire alarm boxes at entrances of place of public assembly. With our present system, it is impossible for us to require boxes at such locations due to our very deficient and inadequate fire alarm system.

We have no boxes at such locations within 125 feet. We are relocating some boxes of this old system to take care of these locations wherever possible.

These boxes should be connected to the building alarm systems only through a master box so that municipal circuits do not enter such buildings.

Such interconnection would give a more specific location to the responding companies through the indicators of the master box.

Alex Thompson, Chief, Detroit, Mich.: We do require fire alarm boxes in theatres and places of public assembly where there is a stage and where entertainment is given. The public schools at Detroit have fire alarm boxes in practically all the old buildings, and whenever a new school is erected, a fire alarm box is installed.

School boxes are connected directly with the fire department. Boxes in theatres and places of public assembly are connected directly with the fire department central office.

I believe that fire alarm auxiliary boxes in buildings should be connected direct to a master box in the building alarm system, which in turn is connected with the fire department central office.

The advantage of such private alarm systems connected directly to the municipal system through master boxes, in my opinion is this: Whenever a box is pulled, auxiliary or not, to summon the fire department, and the alarm goes in direct through the master box to the fire department central office, companies are dispatched immediately to the location, and thus there is no delay in getting companies on the way.

J. C. McAllister, Chief, McKeesport, Pa.: We have a fire box placed outside near all theatres and schools in the city. At the local hospital we have a master box and one in the office of the daily paper which also has an alarm register. This gives them the alarm and the box at the same time that it is coming into Fire Headquarters. This eliminates any dispute as to claims that we were delayed in answering an alarm.

Luther P. Willis, Chief, Pueblo, Colo.: We do not require schools to have private fire boxes. At one time all schools had fire alarm boxes in the school buildings, but on receiving permission from the school boards, we moved them from the buildings and placed them on corners close to the school buildings, believing they would do more good as a fire alarm for the public than just for the school building. Our reason is that should a fire occur in the school building, or on the roof, it would depend on the janitor to pull the box, where if it were on the outside of the building the fire would be seen by passers-by and the department would be notified sooner.

At the present time, we have two fire alarm boxes that are located in school buildings.

I believe it would be of benefit if school boxes were connected to our fire alarm system and operated automatically. If all school fire boxes were connected directly to the fire department system, we would be able to get the alarm as soon as a fire started.

John J. Roche, Superintendent of Fire Alarms, New Haven, Conn.: We don't have any laws that make schools, or any other private places, have private boxes or interior systems.

We have one school that has an interior system with a master box right in their own building. This system is connected and is an approved system.

We have a few more schools that have interior systems and private boxes also, but they are not connected. I believe that the interior systems are up-to-date and that if they were connected, they would not cause any false alarms.

I believe myself that if the interior system is taken care of and tested regularly by someone that understands it, it will save time in the event that it has to be used. I also believe that they should be maintained by someone beside the Superintendent of Fire Alarm.

F. J. Callahan, Chief, Central Falls,

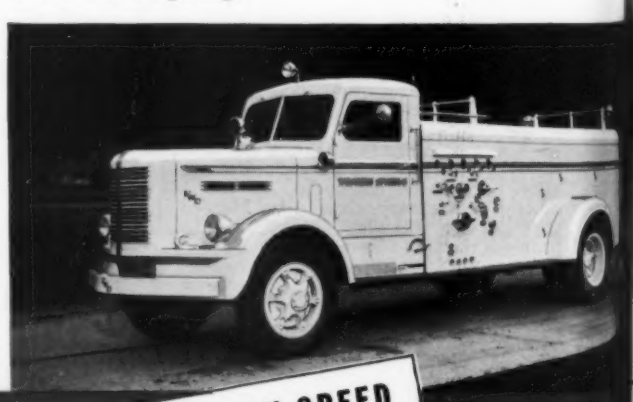
Fire-Fighters—

Like MILITARY FORCES . . . Need Four-Wheel-Drive POWER and PERFORMANCE

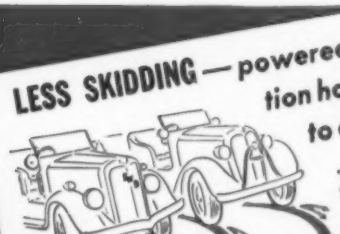
MILITARY needs demand unusual qualifications in a motor truck—the capacity to get through over the roughest terrain — stamina to survive the "forced marches" of prolonged hauling under the severest conditions. Here is where the reserve power, rugged construction, and true application of the four-wheel-drive principle of an FWD make it stand out in sharp contrast to ordinary types of motor trucks — and thousands of FWD's are in service as vital equipment with armed forces.

It is significant, too, that the four-wheel-drive principle is used in practically every wheeled motor vehicle in the military services today. Just as the full-powered traction and superior "going" power of four driving wheels have been recognized by military men, FWD fire apparatus is increasingly preferred by fire-fighting authorities in leading municipalities.

Today more than ever before a heavy responsibility rests upon the fire prevention and fire-fighting forces of this country — the menace of fire and its destruction of homes and vital defense plants must be effectively combated so that there may be no crippling of our all-out victory effort. Cities from coast to coast look to FWD apparatus for the unfailing dependability — the extra safety — the ability to get to the fire with least hazard — so important in wartime fire-fighting.



LESS SKIDDING — powered steering traction holds front wheels to direction of turns.



FWD powered front wheel traction always in direction steered — minimizes skidding.

Steering and propelling force opposed with rear drive — encourages skids.

The propelling force to the front axle of the FWD is always in the same direction in which the truck is steered minimizing skidding and giving more positive steering control. Skidding tests conducted on ice show 50% less skidding due to powered front axle alone

EASIER TO HANDLE AT HIGH SPEED properly balanced

Positive driver control at high speed is a distinct feature of FWD design due to its properly balanced basic construction. Balanced weight distribution makes the truck handle perfectly in any emergency. The added weight on the front axle is used in powered traction for greater safety and increased performance.

FASTER GET-A

ONLY THE FWD FOUR-WHEEL-DRIVE PRINCIPLE PROVID SE

ANSWERS EVERY DEMAND FOR SPEED . . . POWER . . . TRACTION . . . SAFETY . . . DEPENDABILITY

FWD fire apparatus offers . . . power on all four wheels which makes full use of all the engine power for acceleration — slippery streets that ordinarily would cause wheel spin and delay do not present hazards. Positive driver control at high speed is a distinct feature of FWD design due to its properly balanced basic construction. All the weight of the truck and its load are converted into powered traction for superior performance and added safety.

FWD builds a complete line of fire trucks — all types, all sizes — with rotary or centrifugal pumpers in triple or quadruple combinations, aerials, etc. — backed by nation-wide service.

Write today for descriptive literature.

THE FOUR WHEEL DRIVE AUTO CO., Clintonville, Wis.
Canadian Factory: KITCHENER, ONT.

THESE FWD MEN SPECIALIZE IN FIRE APPARATUS:

MERTON H. ANUNSON — Manager of FWD's fire truck sales division. Knows fire-fighting equipment from first hand experience in the field. With the FWD organization since 1935 — specializing in the proper application of FWD's complete line of fire apparatus for every need.

★

G. D. SIMONDS — Assistant Chief Engineer at FWD. During the past 13 years with the FWD organization he has made many notable contributions — he is the designer of the new "H" series FWD trucks and was the first to design special aerial ladder fire trucks to meet New York City specifications. Simonds is a veteran automotive engineer with more than 22 years of experience.

★

CLARENCE ROHRER has been with The Four Wheel Drive Auto Company for 18 years. He started in the machine shop and then was transferred to the inspection department. He worked at parts inspection and floor inspection and for the last 3 years has been in the charge of final parts inspection, rough stock inspection, floor inspection and the salvage department. His title is foreman of the Inspection Department.

ur wheels grip ad for the run.

on all four wheels makes e of all the engine power eleration—Slippery streets dinarily would cause wheel and delay do not present ds. All the weight of the and its load are converted powered traction for maxi- performance. Often only a tion of the engine's full per- nance is utilized when trac- is dependent on only one e of a truck.

Quick Positive Stops for Any Emergency

Two separate and independent four wheel braking systems with brake drums on each wheel are a feature of all FWD equipment. These two super braking systems, combined with a properly balanced weight distribution, provide the most effective braking ability possible.

GREATER HILL-CLIMBING ABILITY — reserve traction with four-wheel-drive

Steep or slippery grades impossible to other vehicles present no hazard for FWD with all four wheels pulling.

Power on the front wheels of the FWD give truck increased climbing ability — the front wheels help to lift the truck over obstructions and up steep grades.

Non-powered front wheels of rear drive trucks ter to block the forward progress of the truck when th meet an obstruction or in climbing steep grad

VID SE OUTSTANDING SAFETY AND PERFORMANCE FEATURES

R. I.: All schools in our city have fire alarm boxes of their own connected to our system. Several have dual box set-ups that can be pulled on each floor.

All theatres are connected to our system at headquarters with private boxes.

I believe direct alarm to headquarters system is the most positive method and should be stressed.

Bertram A. Neal, Chief, Waltham, Mass.: It has been the policy in this city to have fire alarm boxes as far as possible, located within a few feet of all schools, theatres, and other places of public assembly. Some are the regular street boxes and are not designated as private boxes for one building alone.

During the last few years a number of these buildings have had alarm systems connected to new master boxes or to those previously installed at the buildings. This plan will be continued as fast as finances will permit as both the Fire Alarm Superintendent and Fire Chief are very much in favor of it.

Some of the advantages of interconnection of such private alarm systems to the municipal systems through master boxes are the promptness with which the alarm is received at headquarters following the outbreak of a fire and also the ability to assign extra apparatus to buildings where because of their particular hazards, it might be considered advisable.

Some disadvantages are occasional needless alarms, which in our experience have not been very numerous, and the additional work for the Fire Alarm Superintendent in giving these systems the close supervision they require. It is our opinion that the advantages outweigh the disadvantages.

M. E. Clark, Chief, Williamsport, Penna.: We do not require that fire alarm boxes be installed in schools, theatres, or places of public assembly.

There are several buildings in our city that have their private alarm systems connected to a master box on the outside.

I do not believe building alarm systems should be connected to the municipal alarm system unless there is regular inspection made by tests. This work should be done by a member of the electrical bureau of the municipality.

There are many advantages in having the building alarm systems connected into the master box. However, I know of several cases where very bad fires have occurred through delayed alarms when the building alarm systems did not function properly.

H. C. Crumb, Chief, Bay City, Mich.: We do not require fire alarm boxes in schools, theatres or other places where crowds assemble, but do place boxes as near as possible to the outside of same, but not connected in any way with building alarms. As an old fire alarm man, I feel that there is less chance for trouble on fire alarm circuits if they are in no way connected with private alarm systems.

Certainly if fire occurs in any building where city fire alarm systems are connected, the alarm system will be put out of commission.

Edward A. McHugh, Chief, Louisville, Ky.: We do not require fire alarm boxes in schools, theatres or places of public assembly. However, all of the large theatres equipped for road shows and having a large amount of stage scenery are equipped with a fire alarm box.

In the City of Louisville, no individual alarm system is connected with the city fire alarm system.

We do not allow a building or plant alarm system to be connected to our fire alarm system. The master box only is allowed to be connected directly to our system. We believe the procedure of coupling the individual building system to our fire alarm system would cause many unnecessary runs. This is especially true in plants where private fire brigades have been formed and are capable of handling small fires without the aid of the city fire department. In the event the city fire department is needed, the master box is located on the permises and the alarm can be sounded in a second's notice.

John Gibson, Chief, Mount Vernon, N. Y.: Fire alarm master boxes connected to our municipal fire alarm system are required at schools, theatres, hospitals and places of public assembly.

Not all of these boxes are connected to the municipal fire alarm system, but where buildings are equipped with local alarm systems, they are connected. We only have a few buildings which are not connected.

I firmly believe that fire alarm master boxes should be connected to the building alarm systems.

In my opinion, there are many advantages when building alarm systems are connected to master box of the municipal system. This gives better building protection; also better protection to life, for the reason that it will greatly reduce the possibility of a delayed alarm which is very important to the fire service in the saving of life and property.

M. J. Shea, Chief, Fitchburg, Mass.: There are no boxes attached to the school buildings. They are located outside the building on the sidewalk. These are all connected to the fire alarm system of the city. We also have a separate sprinkler alarm for the high school.

In my opinion, it is an advantage to have all private or master boxes connected to the fire alarm, for we know what to expect when the boxes come in.

Howard Travers, Chief, Baltimore, Md.: Municipal fire alarm boxes are not required in schools, theatres or other places of public assembly, and are only installed upon request at the expense of the owners thereof.

The department endeavors to locate street boxes at the nearest available location to buildings cited above.

The department has three installations of an experimental nature in

HERE IS THE PROBLEM FOR THE NEXT ISSUE

1. **Have you had any difficulty in enrolling your quota of auxiliary firemen?**
2. **Do you find interest on the part of auxiliaries lessens after the novelty wears off?**
3. **What methods do you employ for maintaining interest?**
4. **Have they proven successful?**
5. **Do you give your auxiliaries any special privileges? Any uniforms, badges, arm bands, or other means of identification?**

Eight Die in Convalescent Home Fire

Eight elderly persons, including six women, perished in a fire which raged through a convalescent home near Schenectady, N. Y., reducing it to ashes within an hour. Seven others were carried to safety in their nightclothing through snow and twenty degree temperature. The fire, which was beleived to have been started by a patient smoking in bed, caused damage estimated at $20,000.

which interior fire alarm systems are connected with the municipal fire alarm service through a master box located on the exterior of the building. No other type of interior fire alarm systems are connected with the service.

It has been our experience that interior fire alarm systems should not be connected to the regular municipal fire alarm service, and we do not approve thereof.

We do not recommend the interconnection of private fire alarm systems to the municipal system through master boxes, and, as stated, the subject is in an experimental stage at this time.

The responsibility of fire alarm services as to maintenance should not extend beyond the limits of the public highways.

William J. Lutz, Chief, Wilmington, Dela.: Fire alarm boxes are located at the nearest corner or on the face of hospitals, schools and theatres in our city.

They only operate within the building in which they are installed.

Interconnection of private alarm systems to the municipal systems through master boxes enables a speedier response due to the fact that there is no time lost in the pulling of the box. Where these so-called private boxes are struck, companies can take up their prearranged positions when the box was struck. The companies responding would not have to go to the box if it were located on the corner, as the officer would immediately know on receipt of the alarm that aid was needed in the particular building or institution.

Thomas J. Phelan, Chief, Trenton, N. J.: Fire alarm boxes are not required to be installed in schools, theatres and other places of public assembly, yet there are many installations of this type in the city.

Such installations are connected to the alarm system of the building and if not, alarms transmitted go into the office of the protective agency which has direct communication with our operating bureau.

I am of the opinion that such boxes should be connected with the building alarm system providing said system is maintained in an efficient manner.

In my opinion there is an advantage of the interconnection of such alarm systems providing same is maintained in an efficient operating condition in that time is saved in transmitting alarms, thereby allowing the department to make a quicker response.

N. Taupier, Chief, Pawtucket, R. I.: The State of Rhode Island requires that fire alarm boxes be installed in all schools, theatres and private buildings.

In some cases, such as the hospital and one or two mercantile buildings, the boxes are connected to systems in the building. They are also connected in our high schools.

I believe that it is good practice to have the alarm system connected to the systems in buildings as a more prompt alarm can be sent in in cases where a fire might be in an isolated part of the building, necessitating a long run to a fire alarm box.

Grover L. Frock, Chief. Springfield, Ohio: We do not require fire alarm boxes, although I believe such a requirement should be included in our local building code.

We have a Gamewell box in our largest theatre, but this theatre does not have a private system.

I do not believe that private systems should be connected unless they are of the same make as our own, or systems that would work in harmony with ours, and under the supervision of our Superintendent of Fire Alarms.

The advantage of such a system is that the alarm would be transmitted more quickly. The only disadvantage would be the possibility of mischievous children turning in a false alarm.

R. E. Handlin, Superintendent of Fire Alarm, Syracuse, N. Y.: Fire boxes are located near theatres, schools, etc., and in front of, or on the premises, in most cases.

In most cases, especially at schools, the boxes are connected with alarm systems of the building, but not in all cases.

I believe that wherever practical, it is advisable to conect with alarm systems in buildings provided the wiring in buildings and leading to our fire boxes is properly installed under our supervision, not otherwise in any case.

The chief advantage in this installation is that it is possible to trip the box outside without leaving the building.

Herman E. Gutheim, Chief, Cambridge, Mass.: We do not require fire alarm boxes at schools, etc., although many such places have them. In our city the installation is either A.D.T. connected to the sprinkler system or a master box with auxiliary boxes in different parts of the building.

I believe all such boxes should be connected to the building alarm system and also to the fire department.

The advantage is a more accurate notification of the location of the fire. If a life hazard should exist, it could be taken care of more promptly.

W. P. Payne, Chief, Spokane, Wash.: Our city ordinance provides for fire alarm boxes on the street corners nearest the front entrance of each and every school in the city, and also that boxes shall be placed in convenient and strategic locations near theatres and places of public assembly.

In some cases the boxes are connected to the alarm system of the larger buildings, while the remaining locations are connected directly with the municipal system. In many buildings we have A.D.T. connections which are wired direct into fire alarm headquarters, also going into A.D.T. headquarters.

In some cases I believe the boxes should be connected, while in others I do not believe they should be, due to the nature of occupancy of the building and its location in regard to other buildings.

The advantage of connecting to the building system would be only the quicker response of the department in the event the alarm was actually transmitted. On the other hand, the disadvantage would be more prevalent due to the fact that such a system is not specific in its location of the origin of the fire. Another disadvantage I can think of is the possibility of interrupted service due to old and obsolete installation of the original system in the independent building, and also the confusion occurring from answering so many different types of independent alarm systems. I believe the disadvantages overshadow the advantages in a private building system.

J. Frank Van Atta, Chief, Kalamazoo, Mich.: We have fire alarm boxes in all major theatres and school auditoriums. These boxes are connected directly to the municipal fire alarm system.

My personal opinion of not having any private or commercial alarm system connected to our municipal alarm system is that there is no chance for argument as to supervision. We own the boxes; they are paid for by the tatxpayer, therefore why pay again for duplicated service.

S. T. Porter, Chief, Washington, D. C.: In addition to the fire alarm system it is required that a municipal master fire alarm box be installed with a remote control station on each floor of the interior of the building so that the fire department can be quickly and accurately called in case of fire.

In some cases the interior fire alarm systems are separate and distinct and are in no way connected to the municipal fire alarm system. In all large

(*Continued on page* 102)

New Truck for Ogden

Fire Chief Owen A. Owens of the Ogden, Utah, Fire Department and a recently delivered Mack pumper Type 80 Triple.

Our 20 years of Experience

FOGNOZL

- **PERSONAL PROTECTION**
- **RAPID EXTINGUISHMENT**
- **REDUCED WATER DAMAGE**
- **LOW COST PREVENTION**

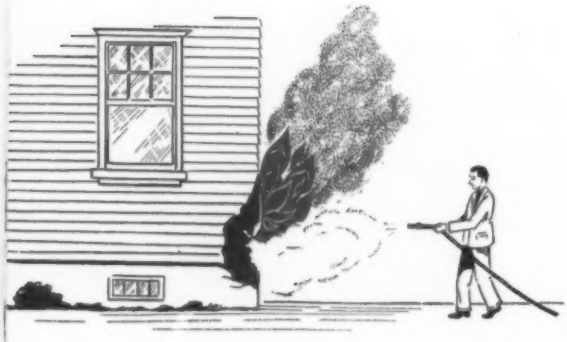
The FOGNOZL is the ideal nozzle for fighting incendiary bomb fires. It has proven itself as the most efficient device for the purpose.

FOGNOZL uses only water as the extinguishing agent.

FOGNOZL is easy to use, anyone can operate it, and it fits on any hose line. No adjustment necessary to form correct size water particles.

FOGNOZL forms a waterfog curtain, which prevents the fire spreading and protects the operator at the same time, and assures maximum efficiency in extinguishment.

FOGNOZL reduces water damage. One gallon of water in the form of waterfog, will extinguish a fire that would otherwise require ten to thirty gallons in the form of a straight stream.



VICTORY NOZZLE

For Home Use.

A specially designed unit, for home use, which can be attached to garden hose.

Built to meet a public demand for home protection. Engineered to protect wife or child; minimum water use!

"VICTORY" Nozzle for garden hose line

Have Your Wholesaler Write Us About the Victory Fognozl

FOG NOZZLE

1520 EAST SLAUSON AVE.

Rockwood Sprinkler Co. (Licensee)

Is NOW your Protection!

FOGNOZL

Saves Lives

PROVIDES A COOL SHIELD OR WATERFOG CURTAIN

for RESCUE WORK

PROTECTED by waterfog from a FOGNOZL, a fireman can walk into fires, and rescue those unable to care for themselves. The fine mist curtain protects the rescuer from the flames. See that your local fire forces are prepared to rescue your loved ones.

AIRPLANE CRASH FIRES

Many airplane pilots involved in crash fires have been rescued under the protection of a water curtain produced by FOGNOZLS.

The following is a typical letter, reporting the results of an Airplane Bomber accident, in which pilots' lives were saved, due to the effectiveness of FOGNOZLS.

Dear Sir:

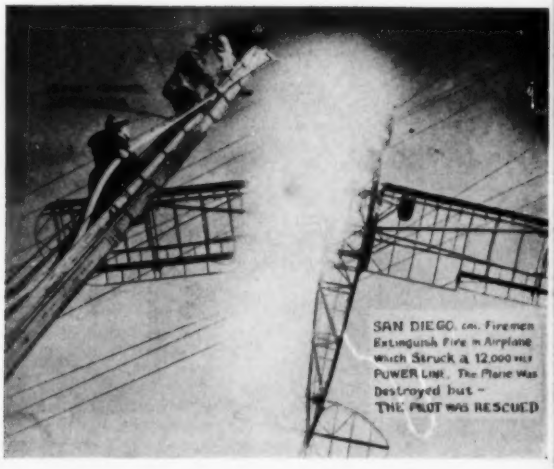
I wish to submit a report as to a bomber crash, B-25, on August 29th, 1941.

The above crash at 11:15 A.M. was fatal to Mr. James Knight, and in my opinion would definitely have been fatal to both pilots, Wild and Penrose had it not been for the service rendered by a crash truck owned by the..... Aircraft Co., who responded to my call (the..... plant is not as yet equipped with a crash truck, which has been on order) and rescued pilots Wild and Penrose through the use of Griswold Fognozls, used in combination, one being a 10 ft. Applicator and the other a 4A Du-al Fog Nozzle.

It is my opinion that this rescue was possible by virtue of the water curtain created by these Nozzles, which in turn, was used as a shield for rescue of the pilots, and had it not been possible to approach the intense heat present behind the water curtain, both pilots Wild and Penrose could not possibly have been saved.

Most sincerely yours,

☆ *Because of the direct correspondence, the writer of the above letter objects to his name and address being publicly divulged but the original may be verified upon request.* ☆


SAN DIEGO, Cal. Firemen Extinguish Fire in Airplane which Struck a 12,000 VOLT POWER LINE. The Plane Was Destroyed but —
THE PILOT WAS RESCUED

Send for Descriptive Literature

COMPANY

LOS ANGELES, CALIF.

Manufacturers' Announcements

Curtis Vice-President of Raybestos-Manhattan

Sumner Simpson, President of Raybestos-Manhattan, Inc., recently announced the appointment of F. L. Curtis, General Manager of the Manhattan Rubber Manufacturing Division, as Vice-President of Raybestos-Manhattan, Inc. Mr. Curtis has been associated with the company since its beginning in 1893. He will also continue as Treasurer of Raybestos-Manhattan, Inc.

H. E. Smith, Assistant General Manager of The Manhattan Division, was appointed to succeed Mr. Curtis as General Manager. J. H. Matthews, Assistant Factory Manager, is now Assistant General Manager. Both Mr. Smith and Mr. Matthews have been with The Manhattan Division for many years.

Pamphlet Issued

The Gamewell Company of Newton Upper Falls, Mass., has recently issued a pamphlet entitled "Plant Protection Fence Supervisory Systems for the Prevention of Unauthorized Entry into Public and Private Properties." This pamphlet contains an engineering report of the advantages and limitations of various types of fence supervisory systems for the prevention of unauthorized entry into public and private properties, especially light and power plants, industrial and governmental establishments.

Richardson Appointed General Manager

The appointment of William S. Richardson as General Manager of B. F. Goodrich Company mechanical goods and sundries sales, is announced by the company's President, John L. Collyer.

Mr. Richardson entered the rubber industry in 1914, as a worker in the belt department of the Boston Woven Hose and Rubber Company, and in 1926 joined the B. F. Goodrich Company on the staff of the assistant works manager. He was assigned soon afterward to the mechanical division, where he installed a planning and scheduling department, and stayed in that activity for two years, extending the system to the processing division.

Completing the assignment of working out a new raw materials regulation and control plan, Richardson was named staff superintendent of the mechanical division and in 1931 was appointed merchandising maanger of the mechanical goods sales division.

Fire Trucks in War Dress

In order to comply with the recent order of the Office of Production Management which restricts the use of chromium, nickel, copper and stainless, steel, the Mack Manufacturing Corporation has been giving careful consideration to preserving the striking appearance that has always characterized fire apparatus. As a result paint treatments have been substituted for the usual bright plating.

Painted trim is available in a choice of colors. As illustrated in the photograph herewith, a warm cream has been selected, contrasting well with the bright fire apparatus red and gold striping. Other combinations, such as a blood red to contrast with the white body color, popular in some communities, golden yellow, bright green or silvery gray, are also obtainable at customers' option. Work is already under way towards selecting types of paints, enamels or synthetics which will give the greatest durability, color fastness and other desirable qualities.

New Foam Mixing Chamber Announced

The American-LaFrance-Foamite Corporation of Elmira, New York, has recently announced a new foam mixing chamber, "the Evertite." This new chamber is designed especially for easy installation on modern oil storage tanks of the pressure type. Its purpose is to provide a simple yet effective method of applying a blanket of foam to burning oil surfaces.

The vapor-proof glass diaphragm is so installed as to prevent vapors in oil storage tanks from entering the body of the mixing chamber, from entering and condensing in chemical solution lines, or from escaping to the air when bottom or top plate, or inspection cap, are removed.

A separate adapter flange is provided for mounting over foam opening in oil tank shell. Flange surface adjoining tank shell is concave to fit curvature of tank. The adapter flange is furnished with studs for bolting in place. A foam deflector plate is in two sections, each with two supporting struts. It may be installed from outside of oil tank, through foam opening, and bolted in place.

The chamber is of expansion type design, with increasing cross-sectional area to ensure intimate mixing of chemical solutions, efficient formation of foam and low velocity delivery.

New Water-Fog Nozzle Developed

A new Type N-20 Waterfog nozzle has recently been developed by the Rockwood Sprinkler Company of Worcester, Mass. This nozzle is particularly effective in the control of incendiary bomb fires. Actually it will not extinguish the fire, but will safely accelerate it. In doing so, it so cools and wets down the surrounding area that it prevents the spread of fire from the bomb.

The N-20 nozzle involves a new principle of generating and projecting waterfog, known as internal impingement. The nozzle creates both high and low velocity waterfog. The low velocity waterfog with its greater extinguishing action is projected by means of the proper amount of high velocity waterfog induced into the low velocity pattern. Thus it is possible to project low velocity fog into the seat of a fire and extinguish it from distances not possible heretofore.

Running fires in flammable liquids may be fought safely and handily with this nozzle. Projected by it, waterfog has a high cooling action on the sides of tanks or vats containing burning liquids or materials. Its great reach makes it an effective weapon to use in putting out fires on the surface of such tanks. Electrical fires may be attacked and put out without danger of bringing the nozzle in contact with "live" electrical equipment.

N. Y. State Firemen Take Examinations

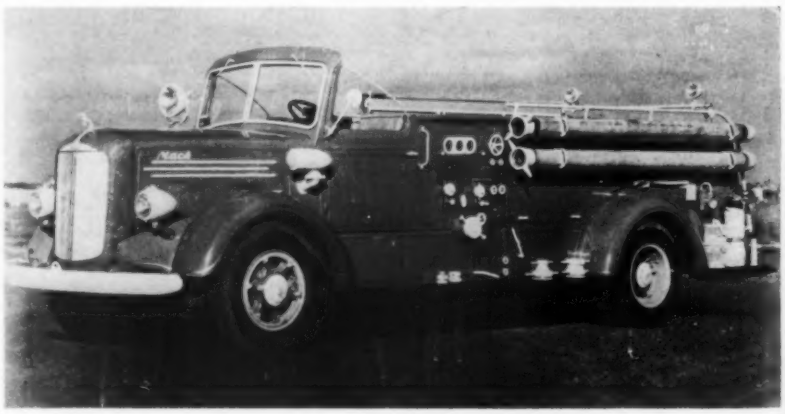
Approximately 6,500 firemen in New York State recently took the firemanic examination following the completion of the course given in the State Educational Department in cities and towns throughout the state.

Chief Jim Deasy, head instructor, reports the average attendance at classes in Sullivan County was 325, which topped the county list.

Chief Hunter Dies

Samuel F. Hunter, former Fire Chief of the Springfield, Ohio, Fire Department died on January 12 after a brief illness.

Chief Hunter was appointed to the Fire Department in March, 1904, and was made Chief only four days after his appointment. He was organizer of the Ohio Fire Chiefs Association in the same year. He retired from active duty in 1928.



Mack Pumper in Its New Dress

FALSE ALARMS

"Surprise"

A Qualified Candidate

He was undersized, meek and subdued, and he had applied for a job as fire guard at a munitions plant.

"Yes," said the manager, dubiously, "but the fact is we want someone who is restless and uneasy, especially at night. Someone who thinks the worst of everybody, and whose suspicions are seldom allayed. Someone who sleeps with one eye open. Someone with remarkable hearing who starts at the slightest sound. Someone who is always listening, thinking there are bad characters around. We want a large, aggressive, intrepid, and dangerous person, bad tempered and revengeful. The kind of person, in short, who, when roused, is a fiend incarnate."

"All right," said the little man as he walked away. "I'll send the wife."

Failed

The young man had just driven home from college at the close of the term. "Did you pass everything?" anxiously asked his mother.

"Everything but two Cadillacs and a Zephyr. Darned if they mustn't have had airplane motors in 'em."

When the chief of the volunteer fire department was about to resign, his men banded together and purchased an elaborate and elegantly engraved silver horn to present to him at a public meeting in the town hall. The fireman who was chosen to make the presentation practiced his speech for days beforehand. The chief, who had been informed of what was to happen, also practiced his speech of acceptance. They rehearsed together and were "letter-perfect" when they mounted the platform in the town hall that fateful night. The throng which confronted them, however, had a disastrous effect on their memory and morale. Holding the horn at arm's length as though it were a slightly decayed fish, the fireman stalked clumsily across the platform, with a ghastly expression on his face, thrust the thing almost in the open mouth of the chief, and stammered:

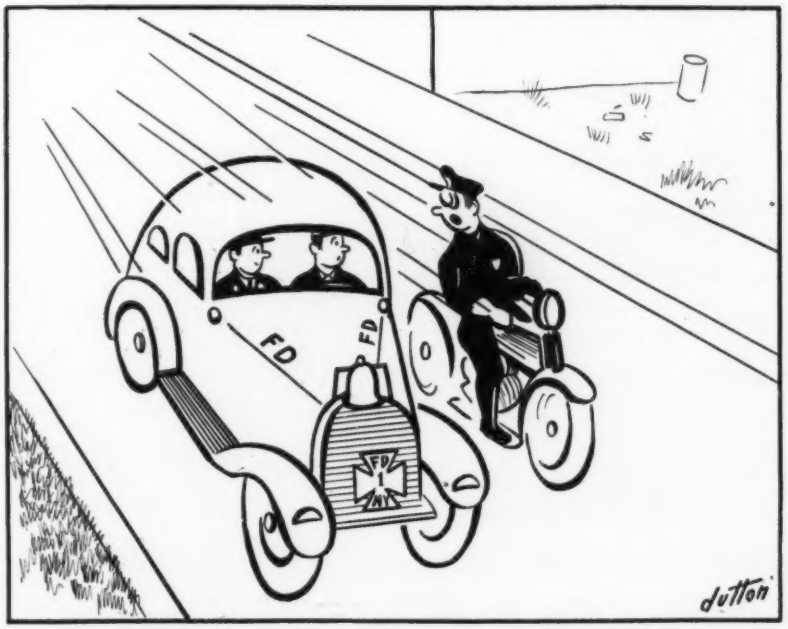
"W-w-w-ell, B-b-b-ill, here's your horn!"

The chief rose with palsied and painful unsteadiness to his feet and gasped: "Hell! Is that it?"

And So to Bed

Some time ago I saw an article in the paper about an old gentleman in North Carolina who had had a cardiac attack. This problem, as we well know, is sometimes difficult. It is hard to tell how to treat them. This old gentleman was 90 and was married to a lady of 28, and had a child two and one-half years old. Six months before he had this cardiac attack he had another child. The doctor said he was doing pretty well and they thought he would recover. It occurred to me that this case presented a problem in treatment—whether to keep this old gentleman out of bed or in bed.—*Dr. Francis R. Hagner, M.D., Transactions of the Southern Surgical Association.*

Dad's theory of relativity is . . . don't let 'em live with you.



"Say, Buddy, where's the fire? . . . Oops, Chief, I guess I just wasn't thinking."

A BIBLE OF INSTRUCTION

- *For the fire chief who wants to train his men—*
- *For the ambitious fire fighter studying for advancement—*

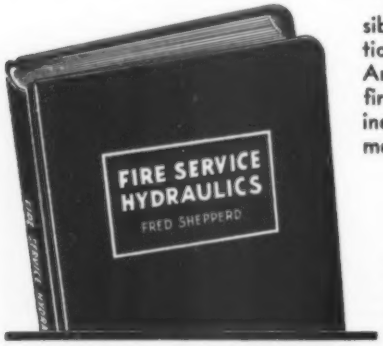
PROMOTIONAL STUDY COURSE FOR FIREMEN

By Fred Shepperd, B.Sc., M.E.

(Editor of FIRE ENGINEERING, and author of such famous and widely used books as "The Fire Chief's Handbook", "Fire Service Hydraulics" and others.)

Published in response to numerous requests from fire department officers and men working for advancement, this new book embraces the famous "Promotional Study Course" which ran serially in FIRE ENGINEERING during the past few years and proved to be so tremendously popular. All the material has been thoroughly revised and brought up-to-date by the author, Fred Shepperd, thus making it easily the latest and best data of its kind available today.

Covering in chapter lessons most of the important phases of fire protection promotional study — mainly in questions and answers form — all of it is in the concise style generally used and preferred by civil service examiners.



350 Pages - Cloth Bound

To fire chiefs and other officials responsible for preparing promotional examinations, this book will be found most helpful. And it is a mighty good reason, too, why fire officers and men should find it of inestimable value in studying for advancement.

$3.00

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If the book doesn't come up to your expectations, return it in good condition within 5 days and we'll refund your money without a word.

CASE-SHEPPERD-MANN PUBLISHING CORP.
24 W. 40th St., New York

Enclosed is $.....(money-order or check), for which please send me a copy of "PROMOTIONAL STUDY COURSE FOR FIREMEN" (returnable within 5 days if not satisfactory).

NAME .....

ADDRESS .....

CITY and STATE..... 2/42

Where O.C.D. Fire Apparatus Will Go

Cities in the target areas will not be required to submit requisitions for protective equipment including gas masks and auxiliary fire-fighting equipment, to be provided by the Federal Government out of the appropriations of 100 million dollars recently passed by Congress, it was announced Feb. 3 by James M. Landis, Executive of the Office of Civilian Defense.

Mr. Landis' statement was made following receipt of many inquiries by the Protection Division of the Office of Civilian Defense from municipal authorities inquiring as to procedure they should follow to obtain this material. He outlined the following explanation of the allocation of such material:

"The Office of Civilian Defense has based its plans for the purchase and allocation of auxiliary fire apparatus on the following factors:

"Priority to be based on consideration of the likelihood of attack of certain areas, their vulnerability to attack and their importance to the national defense.

"The determination of these factors was left to the War and Navy Departments. However, as a preliminary measure, with a view to determining the number of auxiliary pumpers that would be needed, existing equipment was carefully and completely surveyed, particular attention being directed to the number of units over 15 years years of age. This survey was made without regard to possible target areas.

"The estimate for the auxiliary fire fighting equipment submitted by this Office to the Congress was made upon tentative allocations on the following basis:

"In cities under 200,000, one auxiliary pumper for each pumper in operation, plus one pumper for each existing pumper over 15 years of age. In cities over 200,000, because of high value areas, two pumpers for each pumper in operation, plus one pumper for each pumper over 15 years of age.

"A determination of our minimum requirements was then made by limiting the possible target areas to within 300 miles of our seacoasts and certain localities outside of 300 miles target area, selected for their industrial importance from a national defense standpoint as recommended by the War and Navy Departments.

"Scarcity of materials and the lack of productive facilities make necessary the above limitations."

New Improvements to Catlettsburg Fire Department

The City Council of Catlettsburg, Ky., recently placed an order for a 500-gallon pumper equipped with all standard equipment and in addition, with a 100-gallon booster tank. This piece of apparatus is to be delivered within 100 working days.

The new fire department equipment is being purchased under authorization of an $8,000 municipal bond issue. The bonds will be issued in $500 denominations bearing four per cent interest and will be retired at the rate of $1,000 per year.

Sam R. Cumpston is Chief of the Catlettsburg Fire Department.

Civilian Defense Appropriation Made

The Office of Civilian Defense was given the authority to administer civilian defense efforts as a result of a bill passed on January 19 by both houses of Congress. The O. C. D. appropriation of $100,000,000 would be used to defend cities now financially unable to provide their own protection. Protection was also extended to sabotage and other war hazards as well as to bombing attacks.

At the time Congress was passing the civilian defense bill, President Roosevelt and the O. C. D. Executive Director James M. Landis were discussing the possibility of working the American Legion into the defense setup. The American Legion has maintained a civilian defense department for some time and has been instrumental in establishing organizations all over the country through its 11,700 posts.

President Roosevelt in replying to a telegram from Representatives John Z. Anderson and John M. Costello of California, urging organization of adequate civilian defense under control of the War Department with a full-time civilian defense administrator reviewed steps already taken for civilian defense and the cooperation of state and local governments in a program to provide air raid warning, fire protection, first aid and other necessary services. He said he believed such services could best be provided by cooperation of Federal, state and local agencies. He said problems of civilian defense must be organized to meet the needs of specific localities that may be attacked.

Fireman Killed in Roof Collapse

One fireman was killed and several others injured in a general alarm fire that swept through the four-story Institute Hall Building in Cambridge, Mass., on January 12th. The fire, starting on the unused top floor about 4:14 P.M., spread quickly to all the other floors and virtually turned the building into a roaring furnace. Upon arrival of the first alarm companies additional alarms were turned in until a general was reached, summoning all available apparatus in the city and bringing aid from Boston, Sommerville, Belmont and Arlington.

The fireman killed was William Davidson, aide and chauffeur for Deputy Chief George Church, and a veteran of 22 years. Davidson was working on the roof of an adjoining one story building when the wall gave way, burying him under the debris. Members of the Rescue Co. extricated him and lowered him by ropes to an ambulance which sped him to the Cambridge City Hospital where he was pronounced dead on arrival.

The sixty-five year old building, which was once used as a theatre and later as a hall for political gatherings, burned furiously before the tons of water that were poured into it began to take effect. A large amount of canned goods and clothing belonging to the U. S. Surplus Commodities was destroyed as was also a large amount of waste paper collected by the local Boy Scouts in the interest of national defense.

The damage was unofficially estimated at $100,000 dollars.

A. H. Selleck

PARADE.

OF THE **INDIAN FIRE PUMPS!**

TRAMP...TRAMP...TRAMP

the boys are marching. Auxiliary firemen, each armed with an **INDIAN FIRE PUMP**, *pass in review at a Civilian Defense Turnout.*

POSSIBLE fire attack from the air, coupled with an outbreak of sabotage and arson, increase the responsibilities of the war time fire department. INDIAN FIRE PUMPS control incendiaries, wet down area around the bomb and prevent spread of the fire. Continuous, long distance spray from 147 Bomb nozzle is ideal for this work. One man can operate an INDIAN where 3 or more are needed for the stirrup pump. Only CLEAR WATER used.

Be prepared to handle fires in defense industries — power plants, warehouses, homes, transportation systems in city or rural areas, with INDIAN FIRE PUMPS. No hose to lay. 5 gal. leak proof tanks carry by handle or slung on back. *Be sure you have plenty of INDIAN FIRE PUMPS.*

INDIAN *Fire Pumps*

FIRST IN WAR—FIRST IN PEACE AND **FIRST** IN THE MIDST OF THE FIRE FIGHTING

WE CAN MAKE PROMPT SHIPMENT

D. B. SMITH & CO., 406 Main St., UTICA, N. Y.

PACIFIC COAST AGENTS:

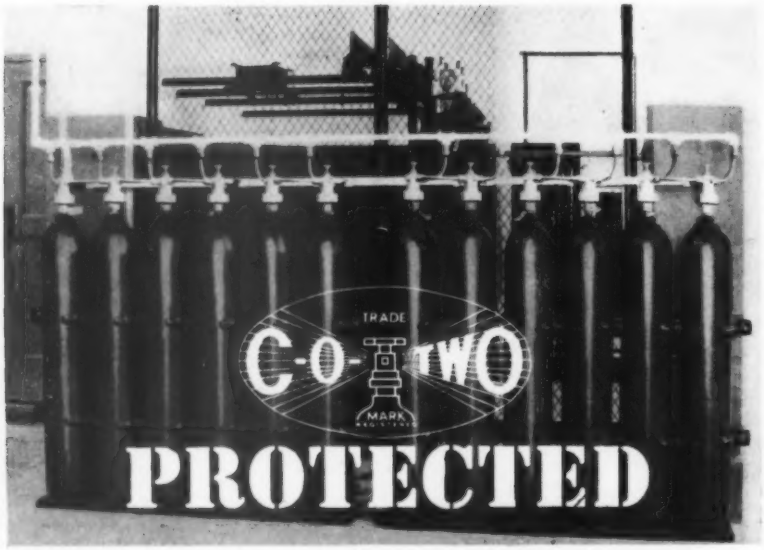
Hercules Equipment & Rubber Co. 550 Third St., San Francisco, Cal.

Carco-Conwhit Sales Co. 520 S. W. Pine St., Portland, Ore.

The Conwhit Co. Klamath Falls, Ore.

Mill & Mine Supply, Inc. 2700 4th Ave., St., Seattle, Wash.

Roy G. Davis Company 617 E. 3rd St., Los Angeles, Cal.



NO TIME OUT FOR FIRE

A blasting blaze in a dip tank; a roar of flames in a storage room; the quick blistering heat from a burning transformer fire; ALL these FIRES can be killed in split seconds when your plant is protected with a C-O-TWO* Fire Extinguishing System.

IT'S SAFER *because* IT'S FASTER

No mess or mopping-up or shut down from water and fire axes. C-O-TWO is harmless to equipment and materials. Industry now knows that carbon dioxide, the fastest fire extinguishing agent known to man, can smother a smoldering fire before it flames, and in a few seconds kill a raging oil or electrical fire. Today more and more enterprising firms, who cannot afford a minute's loss of production, are equipping their plants with C-O-TWO portables, hose units, fixed built-in automatic and manual systems. There is C-O-TWO equipment—large or small—to protect your plant against fire. Why not write today for information about the C-O-TWO modern way of fire fighting? Do it now.

C-O-TWO is a registered trademark. To be safe, specify "C-O-TWO" and this company's name when ordering.*

C-O-TWO FIRE EQUIPMENT CO.

10 EMPIRE STREET, NEWARK, NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience goes into their manufacture and they embody valuable and exclusive features.

Write for the FACTS.

EDDY VALVE CO., Waterford, N.Y.

CORRESPONDENCE

Rural Fire Protection Plan

To the Editor:

Two years ago we put into effect in Noblesville Township a rural fire protection plan which offers protection to residents within a distance of three or four miles of the City of Noblesville.

The reason for my interest in this protection plan is two-fold. First, the township was without fire protection, and secondly, the city of Noblesville had only one pumper for its own protection.

When a fire call came in from the township, we were unable to send our one pumper for it would leave the city without any protection. Insurance companies may contest payment of a claim for fire if the equipment was not in the city to protect the policy holders. The city would then be liable for damages.

I wrote a proposed agreement of cooperation between the city administration and the township officials which was passed upon. The township is to purchase the chassis and pumper truck and the city is to provide some of the equipment for it.

The city is to house and care for the equipment and to donate the services of one driver or operator to make runs in the township. The city Fire Department will train and school volunteer firemen and organize companies to fight fires in the township. The city is to turn over as a trade in, if anything can be realized on the trade, an old hose truck.

The city is to be allowed to use the township truck in emergencies if auxiliary equipment is necessary. If the city were using the truck, and a call should come in from the township, the city would release it and send it to the township.

This plan will work in very well with our National Defense program, for it will give more fire protection to all in this locality, possibly reduce insurance rates and cut down fire losses.

A few remarks about the Noblesville Fire Department: We have seven paid men and will train thirty-five additional volunteer firemen in this city and provide them with the proper clothing for fighting fires.

We have an American-LaFrance 500-gallon pumper, an American-LaFrance ladder truck and an old Indiana hose truck.

We spend much time and work on fire prevention, as we have a Firestone defense plant and several other industries located in this section.

Very truly yours,
HERMAN E. LAWSON, Chief
Noblesville, Ind., Fire Department

The Stars and Stripes Unfurled

To the Editor:

With every American publication shouting the words "Remember Pearl Harbor" and "Keep the Flag Flying," the verse submitted was written by the undersigned December 19, 1941, as one answer to every challenge.

The title "The Stars and Stripes Unfurled" seems to most emphatically express the reaction of a people whose very liberty is so suddenly challenged.

In these simple words may be recognized words for a theme song with a martial air; a united American "Pledge of Allegiance;" a plea for justice in peace or war; a determination to win both war and greater justice; a prayer and a pledge and a song to defend democracy; a martial spirit of patriotism in a summons to all the forces of America at arms to wave the Stars and Stripes for freedom everywhere.

The Stars and Stripes Unfurled

God gave the world a symbol—
A flag we all adore.
A banner all America
Will wave for evermore.
In peace a sign of justice,
In war a brilliant light,
A light that guides to victory
Throughout the day or night.

God bless our flag oe'r land and sea
On high, above the world—
In peace or war for liberty—
The Stars and Stripes unfurled.
God bless the sons who man the guns
On land or sea or air—
Who wave the flag of America
For freedom everywhere.

Cordially,
FRED D. CAMPBELL,
Member Bureau of Fire Prevention.

Chief Beckerle Dies

Peter A. Beckerle, retired Chief of the Danbury, Conn., Fire Department, and a veteran in Connecticut fire circles died on January 15, following a long illness. Chief Beckerle was born in Danbury in 1860 and joined the Fire Department on May 1, 1881, at the age of 19. His first duty was as foreman of the Beckerle Hose Company, named after a cousin. He served the department for fifty-five years, fifteen of which were spent as Chief.

In 1884 he was named captain, and in 1893, when the department in that city was organized into a combination of regular and volunteer companies, he was promoted to assistant chief. On May 1, 1916 he was named chief. He retired in 1934.

In 1916 the Danbury Fire Department consisted of twelve paid men. One of the first steps taken by Chief Beckerle, upon assuming the office of Chief, was to interest the fire officials and taxpayers in installing the two-platoon system. He was also instrumental in securing four wage increases for the firemen, placing his men on an equal basis with other departments in the state.

Soon after becoming department head in 1916, he installed a modern system of fire prevention. He also gave the city its first building code and as Fire Marshal, he supervised the construction work of several of the buildings that now stand in the business district of Danbury. At the time of his death Chief Beckerle was President of the Fairfield County Fire Chiefs' Emergency Plan.

THOMAS F. MAGNER

Moore Chief at Shaw Field

Captain M. S. Moore, for twenty-six years a member of the Columbia, S. C., Fire Department, has been granted a leave of absence during the emergency to serve as Fire Chief at Shaw Feld, the new army airport at Sumter.

SUPPOSE you were building your own fire pump. Can you see one bearing that you would leave out? WATEROUS Fire Pumps are fully anti-friction bearing equipped. Each bearing runs in oil and is protected from water and sand. These are but a few reasons why WATEROUS Pumps are Dependable. Specify WATEROUS on your new fire apparatus.

Waterous Est. 1888

WATEROUS COMPANY • ST. PAUL, MINNESOTA

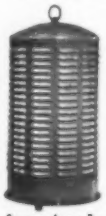
WATEROUS
CENTRIFUGAL-ROTARY
FIRE PUMPS

We shall appreciate your mentioning FIRE ENGINEERING *when writing advertisers*

SIRENS BY SPARTON

AIR RAID—FIRE! EMERGENCY!

A LINE of sirens, horns and emergency signals famous for more than forty years for precision manufacture.



MODELS 37, 38 and 39—A series of big, rugged, high powered, non-directional electrical sirens that have a penetrating siren howl which carries for 2 to 5 miles. Particularly suitable for large areas such as municipalities, airports, government properties, industrial or defense plants, universities and public utilities.

Strong, serviceable, precision-built; comparable to units costing considerably more.

Base has three lugs for installation on roof. Base threaded for standard 2½" pipe for high altitude mountings; guy wires can be attached to lugs. Made in three sizes with universal motor operating on 50 to 60 cycle AC single phase or DC current. Equipped with screens to keep out bugs and birds. Constructed to withstand all weather conditions.

Volt	Height	Diam.	H. P.	R.P.M. Approx.	Weight
Model 37—110-120 AC-DC	25¼"	14"	1	7600	82 lbs.
Model 38—110-120 AC-DC	30¼"	14"	2	6800	93 lbs.
Model 39—220-230 Single Phase AC	30¼"	14"	3	5700	105 lbs.

MODEL 35

A directional siren for small communities, railroad yards, docks, warehouses, car barns, business buildings, apartments, industrial plants, local fire stations. Equipped with screens to keep out bugs and birds. A practical, rugged alarm for protection against intruders, sabotage and all civil, military and industrial emergencies; weatherproof. Operates on 110 volts, 60 cycles AC. Ht., 9½"; length, 14"; wt., 15¾ lbs.

MODEL 36

Equipped with flare for efficient projection of tone. For motor cars, trucks, ambulances, fire and police cars, motorcycles, boats. Endorsed by law enforcement authorities, air wardens, marine patrols. Directional. 9 ft. of cable and push button included for installation in any location. High speed motor. Available in 6 volt, 12 volt, 32 volt. Ht., 9"; width, 7"; length, 11"; wt., 11 lbs.; rotor diam., 5½".

MODEL 601

As designed for use on Army Tanks. Ideal for police, fire and emergency cars, ambulances, motorcycles. Rugged, all steel construction; housing and base of heavy drawn steel stampings. Equipped with 6-Port-opening rotor. Directional. Available in 6, 12 and 24 volts DC—R.P.M. 7000 Approximate. Wt., 4¼ lbs.; diam., 4¾"; length overall, 6¾"; ht., inc. base, 5⅞".

THE SPARKS-WITHINGTON COMPANY
Jackson, Michigan—1900-1942

WRITE FOR BOOKLET 590-S for further information

A CORRECTION

Inadvertently, in our advertisement featuring the Montour Falls Pumper, in the January issue, a mistake was made in the calculation.

Whereas we said the pumper operated "364 hours, or more than 4 weeks" it should have been 744 hours, which is actually 31 days of continuous running time.

We are sorry we made the mistake, but regardless, this record speaks well, for the dependability of Ward LaFrance apparatus.

WARD LAFRANCE TRUCK CORP.

New York Branch
139th St. and Southern Blvd.
New York City

ELMIRA HEIGHTS — NEW YORK

WHAT'S BURNING?

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of January, 1942. These figures, compiled from the telegraphic reports, are based on estimates made at the time and are subject to later investigation and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent losses in thousands of dollars.

Month Ending January 31	Loss in Thousands of Dollars
South Edmonton, Alta.—Metropolitan United Church damaged	60
East Hartford, Conn.—Dredge Lawrence of Packard Dredging Company of Boston destroyed	170
Taylorville, Ill.—Montgomery Ward & Company store destroyed	100
Chelsea, Mass. — Chelsea Theatre Building destroyed	65
Missoula, Mont. — Shapard Hotel, Gamble Hardware Store and Yants Men's Store with contents destroyed	160
Bessemer, Ala. — Sokol's Department Store destroyed	100
Mason City, Ia.—Two warehouses, packing house and equipment house of Northwestern States Portland Cement Company destroyed	65
Bad Axe, Mich.—Grade school building destroyed	50
Portland, Ore. — Gilbert Brothers Hardware Company and General Paint Corporation damaged. Contents destroyed	125
Harrison, Ark. — Ridgeway Consolidated School destroyed	50
Fox Lake, Ill. — Drug store, grocery and meat market destroyed	70
Buffalo, N. Y. — Washington Meat Market damaged	50
Great Bend, Kan.—Cox Building occupied by Safeway Store and offices	60
Akron, Ohio—Akron Art Institute Building damaged and collection of ninth century Siamese pottery destroyed	130
Putnam City, Okla. — Senior High School and Auditorium destroyed	80
Calgary, Alta. — Ten stores and shops destroyed in town of Delia, 100 miles northeast of here	170
Emeryville, Calif.—Barrel plant of McGuire Company destroyed	80
New Britain, Conn.—Odd Fellows Building damaged	50
White Hall, Ill. — Coed Dress factory destroyed	50
Flemingsburg, Ky. — Four buildings of the C. L. Dudley group, including a furniture store, theatre, dry goods store, variety store and an apartment, destroyed	55
Lebanon, Pa.—St. Paul's Evangelical Church damaged	50
West Scranton, Pa.—Two buildings housing six stores, a meat market and a beauty parlor damaged	80
Chowchilla, Calif. — Chevrolet garage destroyed	65
Calumet, Mich.—Armory destroyed	50
Stillwater, Minn. — New Deal Cafe, Sears Roebuck store and Singer Sewing Machine building damaged	50
Brookfield, Mo.—Six business buildings destroyed	170
Bordentown, N. J. — William MacFarland High School damaged	300
Montreal, Que.—Building of Fraser Brothers, Ltd. damaged	80
Fort Smith, Ark.—Neon Sign and Service Company and Yandell Wholesale Drug Company damaged	50
Mountain View, Calif. — Richmond-Chase packing plant warehouse destroyed	80
Waterbury, Conn.—Two buildings destroyed and two damaged in shopping district	210
Russiaville, Ind. — Russiaville Methodist Church destroyed	50
Billings, Mont.—O'Malley Lumber Company plant destroyed	80
Buffalo, N. Y.—Two-story building owned by Cook Coffee Company destroyed	50
Seattle, Wash. — Home Laundry Company plant damaged	50
Ottawa, Ont.—U. Stanley Apartment block, Classic Hand Laundry, Alfred Snipper auction rooms, Munro's drug store and James Beauchamps Restaurant damaged	80
Chicago, Ill.—Herman Warehouse Company	170
Memphis, Tenn.—Warehouse of Davis-Mize Company, Inc., damaged	50

Little Rock, Ark.—Shed of Wholesale Curb Market destroyed 60
Greenwood, Ind.—Greenwood High School, including building and equipment, library, shop, home economics, band equipment, destroyed 80
North Andover, Mass.—Two-story frame roadside furniture warehouse damaged.... 50
Grand Rapids, Mich.—Middleton Medical Center damaged 80
Waseca, Minn.—Herger Importing Company, Herger Department store, Johnson radio store, Crystal Cafe and Bundle Variety store destroyed and Bundle grocery store damaged 170
St. Paul, Minn.—Curtis 1,000, Inc., printing display room and tap room of adjoining athletic club damaged..... 80
Raeford, N. C.—Power plant of Raeford Power Manufacturing Company damaged; two generators, transformers and power house destroyed 50
Middle Bass Island, Ohio—Lonz Winery burned, including 1,000 barrels of champagne and other wines..... 170
Port Allegheny, Pa.—Drug store and adjoining apartments damaged..... 70
Palestine, Tex.—Neches High School and gymnasium destroyed 50
Cambridge, Wis.—Kramer department store and Kampstead clothing destroyed..... 50
Norwich, Conn.—Business row including meat market, Chinese laundry, restaurant, fish market, tire shop and confectionery store damaged 65
Rock Creek, N. C.—Two barns, equipment, 132 cows at Rock Creek Dairy destroyed 80
Lakewood, Ohio—Clifton Club destroyed... 65
Sanford, N. C.—Sapona Mills, Inc., manufacturers of cottonseed and soy bean meal, oils and fertilizer damaged..... 65
Brockway, Pa.—Brockway Macaroni and Supply Company plant damaged..... 170
Westville, Nova Scotia—Seven buildings in one group and department store on the opposite side of the street damaged..... 65
Birmingham, Ala.—Whitaker Terrace Apartments destroyed 65
Claymont, Del.—Warehouse of Texas Oil Company and company's docks damaged.. 225
Jefferson, Ga.—Martin Institute, a public school 100
East Cambridge, Mass.—Four-story brick building occupied in part as storehouse for Federal surplus commodities destroyed.... 80
Detroit, Mich.—Fred Sanders Confectionery & Baking Company store damaged..... 65
Syracuse, N. Y.—Two of three buildings of the Lennox Furnace Company destroyed.. 200
Baker, Ore.—Planing mill, dry shed and box factory of the Stoddard Lumber Company destroyed 170
Chester, S. C.—Building owned by Belk Husdon department store, housing store, Chester Radio Service, offices and lodge rooms of Knights of Pythias and Masons; Pryor Building occupied by Duke Power Company, Chester Furniture Company, Rockhill Production Credit Association and Federal District No. 3 offices; Building of People Furniture Company and Chester Hotel, damaged 210
Stone, Ky.—Club House of Eastern Coal Company destroyed 65
Walden, Mass.—Two-story Kernwood block occupied by five stores, destroyed..... 55
Wanamingo, Minn.—Block of buildings on Main Street damaged; Heller Garage and Romness Cafe destroyed..... 65
Binghamton, N. Y.—Plants of Runyon & Ogden, heating and steam fitters; McGill Machine Company; Nitke Brothers leather goods and Wilcox Glove Company destroyed 80
Springfield, Ohio—Union National Flour Mill damaged 185
Tacoma, Wash.—Lumber drying plant of Wheeler Osgood Lumber Company and mill machinery and stock damaged..... 250
Sacramento, Calif.—Oil storage tanks of Signal, El Terjon, Gilmore Sunland, Beacon and Hancock Oil Companies destroyed 100
Detroit, Mich.—S. S. Kresge Company building damaged 50
Cordell, Okla.—Theatre, drug store and hardware store destroyed..... 50
High Point, N. C.—Peerless Veneer Company plant destroyed..... 70
Chattanooga, Tenn.—Koblentz Men's Store damaged 50
Lorain, Ohio—Building housing Scott's ten-cent store and offices above destroyed and Isaley Dairy next door damaged..... 170
Cincinnati, Ohio—Netherlands Plaza Hotel damaged 170
Sacramento, Calif.—Del Paso Theatre, Nepsted confectionery store and David's liquor and sporting goods store damaged..... 100
Lynn, Mass.—Hotel Melvin damaged..... 50
Worcester, Mass.—Old Coe Wrench Company building damaged. Occupied by Areotrades Aviation School and Tylo-Roofing Company 65
Sheridan, Wyo.—Wyo Theatre destroyed and

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ready-to-wear store and a cafe damaged.. 60

Los Angeles, Calif.—Smith Mercer Company, meter manufacturing plant destroyed..... 100

Jena, La.—Jena High School destroyed.... 80

Philadelphia, Miss.—Four dry kilns of Henderson-Molpus Lumber Company and 150,000 feet of lumber destroyed..... 80

Springfield, Ill.—J. C. Penny Store destroyed 250

Westbrook, Me.—Webber's Grain and Feed Store, with apartments on second floor and storage sheds adjoining and thirty cars of grain, machinery and hay, destroyed..... 50

Reading, Pa.—Penna Service Oil Company storage depot damaged..... 80

Garrett, Ind.—Truck of Indiana-Michigan Transport Company with load of magnesium and chlorine destroyed..... 80

Easton, Md.—The 50,000-bushel granary of J. McKennedy Willsi & Son destroyed.. 50

Forsythe, Mont.—Teepee Motor Company destroyed 50

Gibsland, La.—Highway 80 bridge of creosoted timbers over Black Lake Creek destroyed 50

Dover, Ohio—Foundry and machine shop of Wagner & Sons, destroyed..... 80

Dallas, Tex.—Dallas Aviation School hangar and 14 planes destroyed..... 150

Gloucester, Va.—Holy Point, dwelling of C. Leslie Rice destroyed..... 60

Auburn, Wash.—Auburn Academy, Seventh Day Adventist School; furniture manufacturing machinery, destroyed..... 50

Ladysmith, Wis. — Business block including the Elmburg Furniture Company, Clover Belt Cheese Company and local branch of the Lake Superior Power Company, destroyed 50

South Bend, Ind.—First National Institute building occupied by Federal Teachers Corporation, Taube Printing Company, Bear Cat Store, Coates Drug Store and auto supply dealers, damaged 200

Crystal Springs, Miss.—Lamb Lumber Company damaged 50

Bethlehem, Pa.—Boyd Theatre damaged.... 80

Nine Thousand Bags of Coffee Destroyed in Fire

Early New Year's morning, a three alarm fire swept through the second floor and up the elevator shaft of the three story brick coffee roasting, packing plant and warehouse of the Dukane Coffee Corporation, located in the West End section of Pittsburgh, Pa. It destroyed 9,000 bags of coffee stored on the second floor valued at $25,000 and damaged the building to a considerable extent before it was brought under control and extinguished by eleven fire companies called on the three alarms and a special call for extra apparatus.

The first companies arriving at the scene at 2:49 A.M. found the flames bursting from all the windows on the second floor and roaring up the elevator shaft in the rear of the building to the top floor, where they burst out of the rear windows and up to the roof.

A second alarm was sent in at 2:53 A.M., followed by the third at 3:00 A.M. and a special call at 3:29 A.M.

Six pumper streams and two hydrant streams were used by the firemen in extinguishing the flames, with 3,400 feet

of 2½-inch hose in service. Other equipment used was 500 feet of 1-inch lead line hose, 431 feet of ladders and twenty salvage covers.

One 1,250-gallon, two 1,000-gallon and three 750-gallon pumpers; one combination hose, turret and water tower wagon; one squad wagon; one 100-foot aerial truck and one 75-foot aerial truck, with a manual fire fighting force of fifty-eight men, including the fourth Battalion Chief and the Acting Chief of the Department responded.

The fire was first discovered by two rail-roaders working on a shifting crew in the yards of the Pittsburgh and Lake Erie Railroad. They saw smoke coming out of the building at least an hour before the fire broke out, but thought it was only smoke from the coffee roasting ovens. When they returned a little later and found that the smoke had turned into roaring flames, one of them then ran to the nearest street box and turned in the alarm.

Three box cars, loaded with coffee on the Pennsylvania Railroad siding in the rear of the building, were saved from destruction by the firemen.

While the box cars presented somewhat of an obstacle to the firemen in getting into the rear of the first floor of the burning building, they used the roofs of the cars to good advantage in directing their streams right into the seat of the fire on the second floor.

WILLIAM E. PATTERSON

Toronto Landmark Razed

The old town hall of Toronto, Ont., an eighty-one-year-old landmark of the city, was completely destroyed by fire recently. The building, five stories high, was built of brick, and had a clock tower one hundred feet high. Since the war, this building has been occupied by the Naval Association.

The first company to arrive at the fire could see that the building was doomed. A second alarm was sent in six minutes later.

The fire was fought from the roofs of six adjoining buildings and with streams from the aerial tower. Trolley wires were cut to permit the men to work on the aerial and ladders without undue risk.

Chief Sinclair did not permit his men to approach too close to the building, as he feared the walls would give way. After the fire, the tower was ordered razed.

Damage to the old city hall was estimated at $50,000.

J. KARL LEE

Canadian Fire Marshals to Meet

The 1942 Annual Meeting of the Dominion Fire Prevention Association and the Association of Canadian Fire Marshals will be held at the Seigniory Club, Quebec, on May 18, 19 and 20. The President of the Dominion Fire Prevention Association is Mr. D. P. Cruikshank, Steel Equipment Company, Ltd., Ottawa, and the President of the Association of Canadian Fire Marshals is Colonel S. S. Wright, Fire Marshal of Nova Scotia, Halifax, N. S. Mr. W. L. Clairmont, Dominion Fire Commissioner, Ottawa, is the Secretary of both these Associations. The Seigniory Club is located about forty miles east of Ottawa in the Province of Quebec.

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Convention Dates

Feb. 25—FAIRFIELD COUNTY FIRE CHIEFS' EMERGENCY PLAN. Monthly meeting. Darien, Conn. Secretary, Chief John Moehring, Stamford, Conn.

March—THE CONNECTICUT FIRE CHIEFS' CLUB. Quarterly meeting. West Hartford, Conn. Secretary, D. B. Mercer, Woodbridge, Conn.

Mar. 5—INDUSTRIAL FIRE PREVENTION ASSOCIATION. Monthly meeting, Fire Station No. 1, Wilmington Fire Department. Secretary, Harry Hasson, 806 W. 7th Street, Wilmington, Dela.

April—FLORIDA STATE FIREMEN'S ASSOCIATION. Annual meeting. Miami, Fla. Secretary, Chief F. C. Pfaender, Chattahoochee, Fla.

May—IOWA FIRE CHIEFS' ASSOCIATION. 13th annual meeting. Ames, Ia. Secretary, Chief L. R. Morris, Ames, Ia.

May—NEVADA STATE FIREMEN'S ASSOCIATION. Annual meeting. Sparks, Nev. Secretary, E. R. Simms, Sparks, Nev.

May 6-8—GEORGIA STATE FIRE COLLEGE. Annual meeting. Atlanta, Ga. Director, Harry Phillips, Atlanta, Ga.

May 11-15—NATIONAL FIRE PROTECTION ASSOCIATION. Annual meeting. Atlantic City, N. J. General Manager, Percy Bugbee, 60 Batterymarch Street, Boston, Mass.

May 18-20—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. Annual meeting. Schenectady, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y.

June—NORTH DAKOTA FIREMEN'S ASSOCIATION. Annual meeting. Botteneau, N. D. Secretary, H. R. Handtmann, Fargo, N. D.

June—SOUTH CAROLINA STATE FIREMEN'S ASSOCIATION. Annual meeting. Newberry, S. C. Secretary, Chief Paul E. Wilburn, Union, S. C.

June—SOUTHEASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting. Valdosta, Ga. Secretary, Chief Walter W. Stephen, Monsanta Chemical Company, Anniston, Ala.

June 1-5—SOUTH DAKOTA FIREMEN'S ASSOCIATION AND FIRE SCHOOL. Annual meeting. Watertown, S. D. Secretary, M. C. Sullivan, Parkston, S. D.

June 8-10—MINNESOTA STATE FIRE DEPARTMENT ASSOCIATION. Annual meeting. Shakopee, Minn. Secretary, Fred Pfaender, New Ulm, Minn.

June 8-10—NEW MEXICO STATE FIREMEN'S ASSOCIATION. 13th Annual Fire School and 20th Annual Convention. Las Vegas, N. M. Secretary, T. A. Rosenwald, Albuquerque, N. M.

June 16-19—ILLINOIS FIRE COLLEGE. 18th annual meeting. Univ. of Illinois, Champaign-Urbana, Ill. Secretary, Chief Roy W. Alsip, Champaign, Ill.

June 17-20—ARIZONA STATE FIREMEN'S ASSOCIATION. Annual meeting. Prescott, Ariz. Secretary, H. W. Reggin, Prescott, Ariz.

June 22-25—COLORADO STATE FIREMEN'S ASSOCIATION. Annual meeting. Durango, Col. Secretary, G. Turnbull, 215 Boston Bldg., Denver, Colo.

June 23-25—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 20th Annual Convention. Rutland, Vt. Secretary, Chief J. W. O'Hearn, Watertown, Mass.

June 25-27—EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting. Reading, Pa. Secretary, Chief Charles E. Clark, Box 217, Wayne, Pa.

June 25-27—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting. Mechanicsville, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y.

July 1—TEMISKAMING FIREMEN'S ASSOCIATION. Annual tournament. New Liskeard, Ont. Secretary, F. E. Thompson, Box 686, New Liskeard, Ont.

July 15-17—MARITIME FIRE CHIEFS ASSOCIATION. Annual meeting. Kentville, N. S. Secretary, Charles A. Cunningham, St. John, N. B.

August—CONNECTICUT STATE FIREMEN'S ASSOCIATION. Meeting place to be decided upon. Secretary, D. W. Harford, South Norwalk, Conn.

Aug. 11-14—VIRGINIA STATE FIREMEN'S ASSOCIATION AND AUXILIARY. Annual meeting. Luray, Va. Secretary, R. B. Barker, Box 893, Newport News, Va.

Aug. 14-15—VERMONT STATE FIREMEN'S ASSOCIATION. Annual meeting. Middle-

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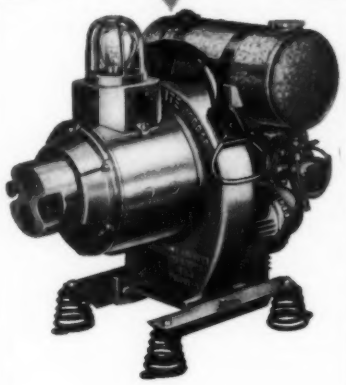

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bury, Vt. Secretary, W. H. Adams, Vergennes, Vt.

Aug. 18-21 — FIREMEN'S ASSOCIATION, STATE OF NEW YORK. Annual meeting. Rome, N. Y. Fred A. Davis, Fort Edward, N. Y.

September—NEW HAMPSHIRE STATE FIREMEN'S ASSOCIATION. Annual meeting. Meeting place to be decided upon. Secretary, Aubrey G. Robinson, Manchester, N. H.

Sept. 15-16—IOWA FIREMEN'S ASSOCIATION. Annual meeting. Tipton, Ia. Secretary, H. C. Reinholdt, Manning, Ia.

Sept. 18-19—NEW JERSEY STATE FIREMEN'S ASSOCIATION. Annual meeting. Meeting place to be decided upon. Secretary, Evan F. Benners, Room 602, 24 Branford Place, Newark, N. J.

Sept. 21-22—TEMISKAMING FIREMEN'S ASSOCIATION. Annual meeting. New Liskeard, Ont. Secretary, F. E. Thompson, Box 686, New Liskeard, Ont.

Sept. 21-24—CALIFORNIA STATE FIREMEN'S ASSOCIATION. Annual meeting. Fresno, Cal. Secretary, Harry E. Strasser, 2046 Oregon Avenue, Long Beach, Cal.

October — ARKANSAS STATE FIREMEN'S ASSOCIATION. Annual meeting. Fayetteville, Ark. Secretary, H. D. Compton, Central Fire Station, Little Rock, Ark.

Oct. 5-8—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION, INC. 47th annual meeting. Atlantic City, N. J. Secretary, Irvin Shulsinger, 8 East 41st St., New York.

Oct. 6-8—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. Annual meeting. Allentown, Pa. Secretary, Charles E. Clark, Wayne, Pa.

Oct. 13-15—ILLINOIS FIREMEN'S ASSOCIATION. 55th annual meeting. Springfield, Ill. Secretary, Chief Roy W. Alsip, Champaign, Ill.

Magnesium Fire in San Francisco

Ian Hardy, night foreman at the National Metals Company, San Francisco, Calif., was using a steel trowel to scrape a magnesium drying oven on the night of November 28, when the trowel hit the side of the oven which caused a spark which was immediately followed by an explosion and fire.

Despite his badly burned hands and arms, Hardy stuck to his post and directed employes and firemen responding to three alarms, in their fire fighting efforts.

Had the fire spread to other sections of the plant where the finished magnesium is stored, a terrific explosion and fire would doubtlessly have caused heavy damage in the Potrero industrial section where the plant is located.

As it was, firemen used sand and chemicals to fight the flames and made a good stop, limiting damage to a few hundred dollars. They were unable to use water, of course, for it would have caused the magnesium to flare.

Pipeman Jack Giessler, of Engine 37, was the only other casualty of the fire. He was treated for powder flecks in his eyes.

The company, which manufactures magnesium powder from metallic magnesium for military purposes, such as in tracer bullets, incendiary bombs and flares, went back on regular schedule within six hours of the inception of the fire.

BOB GREENOCK

Groce and Williams Defense Coordinators

Captain W. A. Groce of Spokane, Wash., and W. Ralph Williams, former Chief of the Fresno, Calif., Fire Department have been loaned by the National Board of Fire Underwriters and assigned as Fire Department Coordinators for the States of Washington and California, respectively.

★ ★

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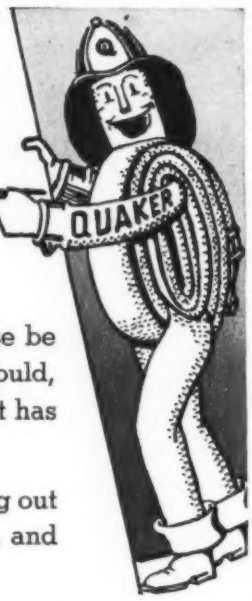

to devote considerable of his time to the needs of Uncle Sam.

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Department and Other Reports Received

Long Beach, Calif.—Twenty-ninth Annual Report of the Fire Department for 1940-41. This 90-page report is very well prepared and presents much interesting data. It is illustrated with photos showing routine department operations. Allan C. DuRee is Chief at Long Beach.

Wellington, New Zealand—Fifteenth Annual Report and Statement of Accounts of the Wellington Fire Board for the year ended March 31, 1941. 12 pages.

Pittsburgh, Pa.—Annual Report of the Bureau of Fire for the year 1940. 27 pages.

Southeastern Association of Fire Chief—Proceedings of the Fourteenth Annual Convention. 52 pages.

Temiskaming Firemen's Association—Proceedings of the Twenty-Fifth Annual Convention. 354 pages.

Hudson Valley Volunteer Firemen's Association—Year Book for 1941. 230 pages.

Pacific Coast Association of Fire Chiefs—Proceedings of the Forty-Eighth Annual Convention. 190 pages.

New Jersey State Firemen's Association.—Proceedings of the Sixty-Fourth Annual Convention. 184 pages.

Colorado State Firemen's Association 1941 Proceedings. 84 pages.

Firemen's Association of the State of New York—Seventeenth Annual Report of the Treasurer to the 69th Annual Convention. 148 pages.

Firemen's Association of the State of New York—Officers' Reports. 126 pages.

New England Association of Fire Chiefs—Nineteenth Annual Convention Report. 266 pages.

International Association of Fire Chiefs—Proceedings of the Sixty-Ninth Annual Conference.

Wilmington, Del.—Annual report of the Bureau of Fire for the year ending June 30, 1941; 19 pages.

Shanghai, China.—Fire Brigade and Ambulance Service Report for the year 1940; 16 pages.

Schenectady, N. Y.—"Your City Government" (1940); 48 pages.

Denver, Col.—"Fire Prevention Is Home Defense" published by the Fire Prevention Bureau of the Denver Fire Department; 8 pages.

California State Program of Firemen Training—Annual report for the fiscal year 1940-41. 29 pages.

McLane Marks Thirty-Two Years of Service

Fire Chief J. Louis McLane recently observed his thirty-second anniversary as a member of the Charleston, West Va., Fire Department.

During fifteen of the thirty-two years, Chief McLane has served as head of the department.

An improved method of folding salvage covers, developed by Chief McLane and members of the department in recent years, is now being used in virtually all fire departments in larger cities of the United States.

The Watch Desk

(*Continued from page 77*)

Seagoing Fire Fighters

Metropolis (Ill.) F. D. recently used ingenuity (as well as water) to fight a fire which threatened the C.B. & Q. R.R. bridge with a loss of $200,000. The Brothers loaded their No. 2 Truck on the Metropolis-Paducah ferry and fought the blaze successfully from below. Which is the first fireboat we ever knew that plied the river thereabouts!

J. W.

* * *

Editor's in "Bad Odor"!

We wondered why Chief Joseph Pellegrino, of Pocantico Hills (N.Y.) was so "chilly" last time we met. Comes a letter from "cliptomaniac" R. C. Heagey, R. 5, Lancaster (Pa.) which lets light (and odor?) on the whole matter.

Writes Bro. Heagey *"Just an inquiry as to what Rockefeller is going to do with the Pocantico Hills Fire House. Note in your January issue he leased the "back house" to the village. In "Penna Dutch" a back house is just that!"*

Un huh—with utter confusion we reread our item of January, which sez: *"From the Pocantico Hills vamps, we understand Mr. Kockefeller will lease back house to village for nominal rent."*

* * *

Record Casualty List?

What looks like a record casualty list was chalked up at Malden (Mass.) last month when 80 firemen were overcome by illuminating gas in fire that swept downtown business block. Fire was controlled by relief crews of firemen summoned from half-dozen neighboring cities. At one time direction of operations was left to out-of-town officers when three Malden deputy chiefs were all *hors de combat*. Some firemen overcome twice, even three times. When F.D. was left crippled by casualties, half-hundred volunteers from neighboring communities manned houses. In addition to those overcome, scores of Malden's 120 firemen were forced to bed by utter exhaustion.

* * *

Family Dies—Baby Lives

Mrs. Kasper Peter Mellang, 26, died of burns received in fire that destroyed her home without ever knowing she had given caesarian birth to a son a few hours after her husband had carried her from blazing home in White Center, a So. Side Seattle (Wash.) suburb. She was also unaware that her husband and their 2½-year old son James Henry later died of burns.

Hospital attendants said newborn infant had good chance to survive.

* * *

"Stowaway from New Years"

From Arbey Killoran, University City (Mo.) F.D., comes humorous account of a fire in that city. According to Arbey, the Brothers of No. 1 Engine had finished their supper and were huddled around the watch desk (no, not this column) trying to grab oñ bits of the evening paper, when the alarm rang. *"Come quick"* came a woman's voice over the wire, *"My gas stove has exploded!"*

Arriving at the scene the men found the stove oven evacuating copious black smoke. Opening the door, they saw—nothing.

"What did you have in that oven?" a fireman asked.

"Nothing," was the reply. *"I was only broiling some steak in the broiler at the bottom."*

Specify HALE

FIRE PUMPS HALE CONSHOHOCKEN PA.

---The fire chief who commands HALE equipped pumpers or pumping units is assured of a high standard of performance, whatever the emergency.

Write today for the Catalog and Folders on the complete line of Hale Pumps.

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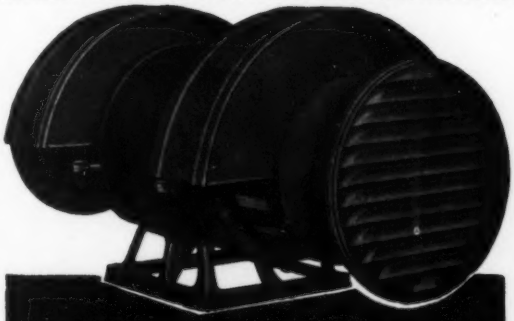
CONSHOHOCKEN, PA.



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GENERAL ALARM SIREN
You Can Depend On It *ALWAYS*

An
AIR RAID ALARM,
TOO!

The Sterling Model "M" Siren, while primarily built for fire alarm signals, is particularly well adapted for the emergency duties attendant on National Defense. Such a duty is the Air Raid Alarm.

This sturdy public alarm with its shrill, penetrating and distinctive vibrations meets and solves both problems.

Rugged and dependable — it is built to deliver 24-hour service. Its performance has never been equalled by any of the other sirens on the market today!

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PACIFIC'S
HOSE COUPLING
DON'T BLOW OFF!

A LIGHT-WEIGHT alloy hose coupling built to *meet defense requirements!* Complete with extra-long tail pieces to permit the use of longer expansion rings . . . a hose coupling that won't blow off. The rocker lug allows the coupling to slip over any obstruction without injury to the hose. Write today for complete information.

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PORTABLE PUMPER
MEETS CIVILIAN
DEFENSE NEEDS
Write Today

Fire Fighting Equipment Division
PACIFIC MARINE
SUPPLY COMPANY
SEATTLE, WASHINGTON

"Are you sure" replied the fireman, as he reached in a gloved hand and scraped out some shattered glass.

The woman's face took on a picture of utter bewilderment as she clapped her hand to her forehead and shrieked: *"My stowaway from New Year's!" "Yeah"* groaned her hubby, as he crowded forward, *"It was a full pint of the real stuff!"*

* * *

Tale of the Decoy Truck!

One of the 'nifties' sent us this month (by an unknown) is the yarn about how Asst. Chief Whitten, Madisonville (Tex.) gets rid of interfering crowds.

No different from other places, Madisonville has been suffering from the "fire chasers" and "sidewalk chiefs" until it got so bad the Brothers couldn't elbow their way through the crowd; which impelled Chief Whitten to do something about it. Now, when the alarm sounds, Chief Whitten's assignment is to mount a spare fire truck and drive any place except to the fire! The regular fire truck, says the account, starts out as soon as Whitten gets the mob out of the way.

* * *

Taint Funny (Mc)Gee!

Out in Kansas City (Kan.) it was fireman Ivan Gee and not the fire that fascinated the crowd of onlookers. Yeah—bundled up in four heavy coats and with stocking cap to protect his ears, Gee sported—of all things—a *straw hat* to top off his working garb.

"We left so quick I grabbed a hat from the wrong hook" mumbled red-faced Gee.

* * *

Firemen Forget Fire Under Food!

Engine Co. 8, Kansas City, (Mo.) F.D. roared out of quarters to a fire. A few minutes later a phone rang at the glass works adjoining the fire station. *"Hey,"* came an excited voice," *Would you mind running over to the engine house and turning out the fire under our chili?"*

What's that old one about "firemen who live next to glass houses should turn out the light?"

Cleveland's Fire Losses Up

Fires in Cleveland, Ohio, so far this year have caused a total damage of $3,125,000, four times the figure for the corresponding period of last year and greater than the combined loss for the entire years of 1939 and 1940.

This figure does not include two fires on November 27 with unofficially estimated damage of more than $100,000. A year ago at this time the fire damage was $754,365, and in 1939 and 1940 total damage for the two years was estimated at slightly over $2,000,000.

Chief James E. Granger of the Cleveland Fire Department believes the increased fires are due to the speeding up of industry.

Funds Received for Defense Program

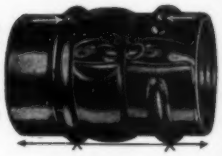
An appropriation of the first $100,000 of a $3,000,000 fire department defense program has been approved by the City Council of Detroit, Mich., on recommendation of the Board of Fire Commissioners. Principal items covered by the $100,000 are $30,000 to implement volunteer fire activities; $24,000 for hose; $12,500 for 100 new fire alarm boxes.

DOUBLE SERVICE
with
BI-LATERAL

This installation shows the position of the rubber lining in BI-LATERAL FIRE HOSE when held in a flattened position between calls into service. This is why we can save a city one replacement, because this hose will give double service of any hose constructed under the old method.

Also we can load 25% more on the apparatus bed actually making an $8,000 truck loaded with Bi-Lateral construction, cheaper than a $7,000 one loaded with other construction.

Here's the new DROP-FORGED rocker lug coupling (not cast bronze) with the swivel protecting feature.



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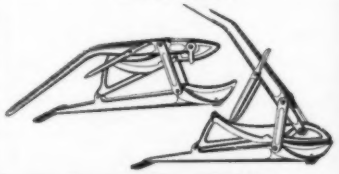
HOSE CLAMP
Type E. The Result of 30 Years' Experience in Hose Clamp Production Based on Actual Use in Fire Service
SIMPLE CONSTRUCTION—OPEN READY FOR USE—WEIGH ONLY 17 POUNDS—INSTANT APPLICATION—ONE OPERATION—LIFT THE LEVER—HAS AUTOMATIC LOCK



SAVES TIME—MEN—EFFORT
Making New Methods Possible.
APPLY CLAMP ON FLAT HOSE
Check Water—Carry the Line Up Ladder or Into Warehouse Empty—Release Man at Hydrant to Help Handle Line.
SAVE TIME IN MAKING CHANGES
No Tracing of Lines—To Shut Down—Instead Use the Men to Make the Changes.

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Sold by All Reputable Dealers
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Film on Incendiary Bombs

The first film authorized for training purposes by the Office of Civilian Defense, entitled "Fighting the Fire Bomb," is now being distributed throughout the United States. It is accompanied by an instruction manual containing supplementary lectures, material for a quiz based on the film, and other instructional material. The film and manual constitute official training material approved by the Training Section of the Office of Civilian Defense.

The film was produced by Transfilm, Inc., of New York City, under the technical supervision of the Chemical Warfare Service and the National Fire Protection Association. The Instructor's Manual was produced by Safety Research Institute, also of New York City.

The scenes of the film are laid in a home—anybody's home—and they show the steps to be taken in preparing for attack by incendiary bombs, as well as the methods of disposing of the light magnesium bomb.

The film illustrates how a solid stream of water, applied to the bomb itself, causes a dangerously violent reaction, but how a water spray does not. Garden hose, pump tanks, soda-acid and foam types of extinguishers are shown as sources of obtaining the water spray—by using an adjustable nozzle with the garden hose, and by breaking the stream of the extinguishers with the thumb against the nozzle opening.

Methods of using dry sand on the bomb are also demonstrated, the sand being shoveled over the bomb, and the mass scooped up, dumped into a pail containing some sand, and carried off the premises.

Copies of the film are being made available to state and local defense councils by the Office of Civilian Defense. Prints of the film and copies of the Manual may be purchased from Transfilm, Inc., 9 Rockefeller Plaza, New York City.

New York City's Fire Loss Is $9,843,671

Fire Commissioner Patrick Walsh of the New York City Fire Department recently announced that the fire loss for 1941 was $9,843,671, a net increase of $206,296 over that of the previous year.

Commissioner Walsh listed the fire loss by boroughs as: Manhattan, $3,159,230; the Bronx, $1,133,340; Richmond, $187,660; Brooklyn, $4,290,158; and Queens, $1,073,283. There were 34,285 fires during 1941, an increase of 5,872 over 1940. The per capita loss was $1.31 as against $1.29 in 1940.

During 1941 there were 162 deaths at fires in the city, an increase of fifty-four over the previous year.

Eighty-six persons were arrested for arson, an increase of sixteen over last year. Of this number seventy-one were convicted, thirty-two for arson and twenty-six for juvenile delinquency, nine for malicious mischief and four for other than arson.

One of the discouraging features of Commissioner Walsh's report was that in spite of the various campaigns to cut down the number of malicious false alarms, 1941 showed an increase of 599 over 1940. There were 9,659 malicious false alarms in 1941.

Barton Front Mounted

AMERICAN-MARSH PUMPS

Barton-American Midship

FIRE APPARATUS CENTRIFUGAL PUMPS

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FRONT MOUNTED FOR EASE OF OPERATION

AUTOMATIC VACUUM PRIMER

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BOOSTER TANK OPERATION WITH TRUCK IN MOTION

Offered in capacities from 250 to 600 G.P.M.

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"ARE YOU PREPARED FOR AN

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COULD YOUR DEPARTMENT HANDLE 10-15 OR 20 MORE FIRES SIMULTANEOUSLY?

DECENTRALIZE FOR ALL OUT DEFENSE

For quick attack on small fires light, fast, mobile pick-up trucks, equipped with PANAMA Booster Pumps on the motors, and with 100 to 125 gallon tanks in the body are the answer to decentralization.

PANAMA equipment can be mounted on most any type truck, whether in the Fire Department or not. It can be installed quickly and inexpensively (the complete cost including pump, tank, and all necessary hose and fittings will not exceed $300 per unit). It will not interfere with the normal operation of the truck or motor. It can be used for drafting water for refilling the tank, for filling backsack cans or stirrup pump buckets. Power for driving the pump is always instantly available.

Complete details and prices will be gladly furnished.

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Control loss from water damage by the use of
SHUREDRY SALVAGE COVERS.
Thorough drill in their use as covers and catchalls will improve your department's record. Light and easy to handle, they do not freeze even at very low temperatures and will not crack when folded for storage.
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INVINCIBLE NOZZLES
PREPARE — PROTECT
Portable equipment is the watchword of today.
Buy—
INVINCIBLE NOZZLES
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Fig. 403
F. N. McINTIRE BRASS WORKS
Successors to A. J. Morse & Son, Inc.
BOSTON, MASS.
1837 - - 1941

The Round Table

(*Continued from page* 83)

Government buildings the interior fire alarm system is of the "pre-signal general alarm type" at which buildings there is maintained a fire brigade and on this type of system the interior fire alarm system is directly connected to the municipal fire alarm system through a selective relay so that the fire brigade upon investigation of the fire can call the municipal fire department automatically from any fire alarm box on the interior fire alarm system.

Our experience for the past ten years definitely indicates that the municipal fire alarm system can be effectively and adequately extended beyond the curb into the interior of private and public buildings where the hazards are such that they warrant the prompt response of the fire department. This is especially true of large apartment buildings where great numbers of people are housed. Facilities should be available on each floor and point of egress on each floor so that in case of fire the occupants would not have to leave the building to call the fire department.

In our opinion, there is great advantage of interconnection between interior fire alarm systems and the municipal system through master boxes, as this places the facilities of the fire alarm system closer to the people who must initiate an alarm of fire. We have found by many years of experience and by the use of great master fire alarm boxes that they have been the means of quickly and accurately initiating an alarm of fire by persons on the interior of our large public buildings as well as institutions and other buildings to which adequate fire protection is required.

Daniel P. Collins, Chief, Elmira, N. Y.: Fire alarm boxes are required on school premises. These are on the fire alarm system.

I believe that all schools should have an auxiliary fire alarm system in the building. This is to be connected with a master box outside. I believe this would save time in sending in the alarm. For instance, if a fire were discovered on the fourth or fifth floor, the alarm could be turned in at that point, saving the time it would take to reach the box in the yard or street.

* * *

The following replies are in answer to a previous question on the use of floor scuppers:

William H. Hill, Chief, Belmont, Mass.: Our building code requires the installation of a 12 by 12 inch dead light in the floor of each store that has over 500 square feet of floor space. This increases the operation on a fire at least fifty per cent.

J. E. Dellinger, Chief, Macon, Ga.: We have some buildings which have small covered openings in the floors. Almost all buildings with basements have a stairway usually located in the rear of the building. If a fire should start in the front of the basement it would be difficult to handle if there is no other opening available and if there is no sprinkler system.

ELK HART IND
A PARTIAL LIST OF ELKHART PRODUCTS
Shut-Off Nozzles
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Turret Pipes
Fire Department Extinguishers
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All Types of Hose Couplings
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38 years' service in the fire field
Prompt service - Quality products
Send for illustrated folder on the New Elkhart Mystery Nozzle.
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ELKHART, INDIANA

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HOSE REPLACEMENTS ARE TOO SLOW
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YOU ARE BUILDING A NEW STATION
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YOU'RE JUST TIRED OF DRYING HOSE THE "HARD WAY"
THEN:- YOU NEED A
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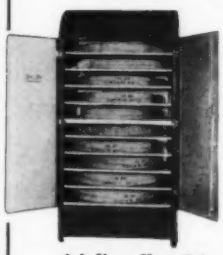
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FIREMAN'S COAT
With Detachable Lining

This coat, furnished in different materials, has a special feature a detachable lining, of pure wool. This feature makes it adaptable to all conditions of weather and assures you of the warm, dry protection that only MIDWESTERN can offer.
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All Midwestern garments are Union Made, A.F.L.
MIDWESTERN MFG. CO.
MACKINAW, ILLINOIS

This Department has had occasion to use scuppers several times with good results. We hope to get all large buildings, especially those with concrete floors, equipped with sprinklers.

Ernest Beckert, Chief, West New York, N. J.: There are some buildings in West New York equipped with floor scuppers.

These insure prompt draining of the floor and also prevent excess load from the water.

Fred P. Higgins, Chief, Grand Rapids, Mich.: We have scuppered floors that drain off water merely by piping through walls at floor level. The hinged cover on the pipe opens with the weight of the water. It is covered so as to guard against extreme weather conditions.

We have an ordinance that specifies that where painting is done above the main floor, the floor must be scuppered and water-proofed.

C. C. Jennings, Chief, Tulsa, Okla.: There are no buildings in Tulsa equipped with floor scuppers.

I believe that scuppers properly installed would aid in stream distribution. They would also result in the saving of time needed in getting cellar pipes in operation. Men cutting holes through the floor could be doing other duties at fire.

* * *

The following replies are in answer to a previous question on protecting fire apparatus in cold weather.

L. R. Morris, Chief, Ames, Ia.: We use a tarpaulin as best we can to cover fire apparatus. It is hard to completely cover a truck.

H. C. Crumb, Chief, Bay City, Mich.: The Bay City Fire Department uses canvas covers to protect fire apparatus at fires during rain, snow or sleet storms.

All apparatus carrying hose have waterproof, mothproof and acidproof canvas covers over hose at all times. This has been found very satisfactory and does not slow up the laying of hose lines.

All service trucks and aerials have canvas covers in reserve for the purpose of protection against anything.

F. W. Donnelly, Chief, Lincoln, Neb.: The only means we have of protecting our apparatus against rain, heavy snow, spray and ice coating is to remove the apparatus as much as is possible from the zone that is affected by the spray and covering it with tarpaulins.

This method is not wholly satisfactory due to the fact that operating parts of the apparatus cannot be successfully covered and that it is difficult to keep tarpaulins in place, especially during a high wind.

George Van Zant, Chief, New Castle, Ind.: Our hose beds have a permanent canvas cover, tailored to fit. These covers come down over the exposed hose at the rear of the truck. They have proven very satisfactory in keeping all weather off the hose as well as dust and flying embers. In severe weather if a truck is exposed to spray, we use a 12 by 14 foot salvage cover over the driver's seat and engine. This practice has been very satisfactory.

PERFORMANCE
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★ ★ ★
HYDRAULIC
PRESSURE—VOLUME—DRAFT
ROAD
SPEED—HILL CLIMB—MANEUVERABILITY
SERVICE
DEPENDABILITY—DURABILITY AND LONG LIFE
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"Fire Apparatus of Quality"
NEW YORK BRANCH
130TH ST. AND SOUTHERN BLVD.
NEW YORK CITY
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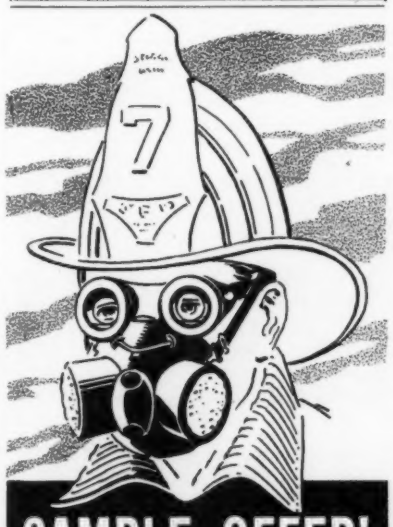
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New DUPOR No. 20, Double Sponge Smoke Mask ($24 doz.)
and famous
"Nod & Shake", Fog-Proof RUBBER GOGGLES ($18 doz.)
1 Sample of Each Sent
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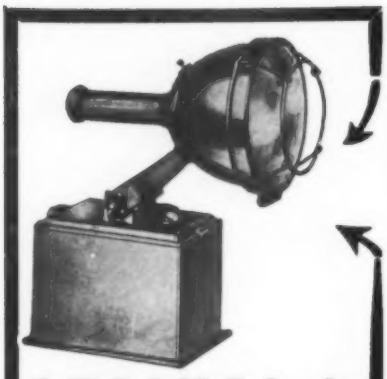
SOUTH BEND, INDIANA
$3.50 POST PAID



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ALWAYS DEPENDABLE

Rugged strength, the right weight and long wear — combined with the skill of 82 years' experience in making Fire Hose.

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SINGLE and DOUBLE JACKETED
BOOSTER • CHEMICAL • SUCTION
STREET and SEWER FLUSHING

TERRITORIES ARE NOW AVAILABLE.

Hewitt Rubber Corporation
BUFFALO, N. Y.

Luther P. Willis, Chief, Pueblo, Colo.: When it is necessary for our apparatus to stand out in stormy weather, we cover them with salvage covers. This method has proven very satisfactory.

Charles Kuhl, Chief, Sioux City, Ia.: We have a tarpaulin for each engine company to cover their hose. This is put over the hose whenever it starts raining. When we are using an aerial ladder at a fire, or as a water tower, we use a tarpaulin to cover the seat and motor. This has worked out very satisfactorily.

V. H. Steele, Chief, Billings, Mont.: We carry tarpaulin covers, the main purpose of which is to cover the dry hose when reloading soiled hose after a fire.

Otherwise we have no provision for protecting apparatus during cold weather against ice and snow conditions.

Frank W. Fuller, Chief, Brainerd, Minn.: We cover any hose remaining in the box with a tarpaulin, and sometimes, if we can spare them, we use tarpaulins on other parts of the apparatus.

J. J. Clark, Chief, Iowa City, Ia.: Salvage covers are used in this city to protect apparatus against snow, sleet and severe rains.

Alex Dotson, Chief, Elkhart, Ind.: We have not used anything to protect apparatus against the weather, and have had no trouble at all.

In the winter we use a felt blanket over the hood of the motor.

Samuel H. Jeffries, Chief, Wilkinsburg, Pa.: Our hose is covered by a heavy duck canvas at all times.

In stormy weather and during the winter, we use a heavy woolen blanket over the front and top of the engine. Whether we are out five minutes or five hours, we never stop our engines. The chauffeur of each piece of apparatus inspects the engine from time to time. In all the years that I have been here, we have never had any frozen engines.

Daniel P. Collins, Chef, Elmira, N. Y.: If the appartus is out for any length of time and it is raining, sleeting or snowing, we cover the motor and driver's seat with a tarpaulin. This works fairly well.

In case we are using an aerial truck and find there is a mist or spray striking it, we also cover the motor, driver's seat and working parts. This serves to keep the main parts of the machine dry.

* * *

The following replies are in answer to a previous question on supplying theatre details:

William A. Gwinner, Chief, Hannibal, Mo.: Theatre details are supplied upon the request of the management of the theatre.

In my opinion the stationing of firemen in theatres or clubs is a very good move especially around holidays or when they have large crowds. It seems to give the people confidence and an assured feeling that they are being protected against fire.

We have found that it tends to lessen smoking where there are large crowds, and that people in clubs are more careful about inflammable deco-

SEALAND TRAILER PUMPS

These mobile trailers made in 150, 250 and 500 gallon units are powered with gasoline motors, carry 500 ft. of double jacket Fire hose, and may be equipped with 100 gallon booster tanks.

Pumps can be purchased without trailers.

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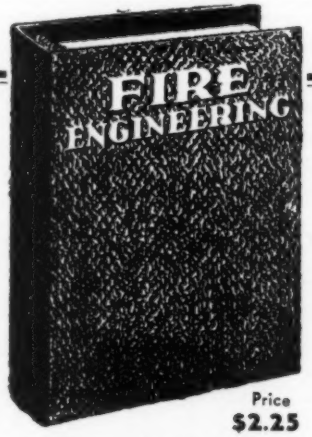
SAUGATUCK, CONN.



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This mask may be worn for protection from wood smoke and numerous acid fumes and gases, by simply changing from one cartridge to another. Not a single dissatisfied user among hundreds now wearing this Healthguard Mask. Comes packed in a neat metal carrying case.

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The WHEAT SPOTLIGHT

a MUST under the NATIONAL DEFENSE PROGRAM

Fire Departments today are called upon to protect the industries that produce our National Defense Program. Equipment built for endurance as well as rugged service is paramount. The WHEAT Spotlight fills one of these demands. With its 25,000-candlepower light, its 100-hour bulbs and 1000-hour battery, it stands ready at all times to answer any demand made on it.

Its battery is rechargeable, without removing it from the lamp and the entire lamp only weighs 6 lbs.

Its light weight and convenient shoulder strap makes it not only a MUST for your department but invaluable because it allows the operator to have both hands free for other duties such as ladder or hose work—

Wrote for full information

KOEHLER MFG. CO.
MARLBORO, MASS.

rations when there is a fireman on hand.

James Louis McLane, Chief, Charleston, West Va.: Each Saturday night a man is detailed to examine all exits in all theatres and to inspect the building. This is required by the fire department.

C. N. Lavery, Chief, Burlington, Vt.: The fire department furnishes a detail of one or more firemen on the request of the theatre management. This request is usually made when there is a show for children or when a special attraction is given with no admission fee. This procedure is followed by all of the theatres in the city. No compensation is asked by the fire department for this service.

There are no picked men for this work. The officers and members alike are selected for this duty.

It is my personal opinion that all theatre managers should take it upon themselves to see that all firemen are admitted to any performance upon presentation of their fire department badges.

I believe that one or more trained firemen or policemen in an audience is an asset anytime, and if an emergency should occur, what would be more welcome. Certainly it gives a fireman or policeman the feeling that his vocation and training is recognized by allowing him to enter admission free. Of course, it would not make any difference in the performance of his duty whether or not he paid his own admission.

Frank D. Shaw, Chief, Greensboro, N. C.: We do supply theatre details on special occasions. These firemen are detailed upon request by the management of the theatres. All companies rotate to perform this task.

C. A. Hart, Chief, San Antonio, Tex.: We formerly supplied theatre details to theatres in our city, but have not now for the past two and a half years. However, an inspector makes a regular nightly visit to all theatres. Details are given on special occasions. Any member of the department may be detailed, but usually an older and more experienced member of the department is assigned to this work.

Daniel P. Collins, Chief, Elmira, N. Y.: Years ago we did detail a fireman to every performance held in a theatre. At that time we had only one theatre. Since the coming of the movies and several theatres, we now send a detail on request. If we know that a popular picture is going to show at a certain place, a man is detailed to that house during the stay of the picture. Of course, a different fireman is sent to each performance, or one in the afternoon and another in the evening. This procedure is followed at public places where large crowds gather. No compensation whatever is made.

Edward J. Green, Chief, Steubenville, Ohio: We do not detail firemen to theatres. If the theatre asks for firemen, we send one or two and they are paid by the theatre. Sometimes when a home show is on we will send a fireman.

Firemen are admitted free to all shows, and managers know they will be some of them on hand when a good show comes. When a big road show comes in there are always five to ten firemen to see the show.

FAST—SAFE—SURE

Protection

POTTER Slide Fire Escapes are now protecting the occupants of thousands of buildings throughout the U. S. and Canada.

All fire chiefs having public buildings such as schools, hospitals, institutions or industrial plants, with high fire hazard in their districts should recommend POTTER Slide Fire Escapes for complete, safe protection.

In addition to the speed of exit, being enclosed they protect the occupants from falling or flying objects. Also, during the winter season, ice and snow do not interfere if an emergency occurs.

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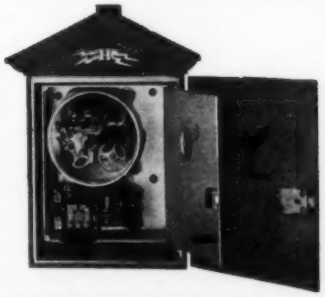

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FIRE ALARM BOX

These high quality fire alarm boxes are made of cast aluminum inside as well as out. This makes for fast, light easy installation and long life free from corrosion.

They are equipped with quick action doors, made to meet every specific requirement, and are non-interfering of the shunt and successive type.

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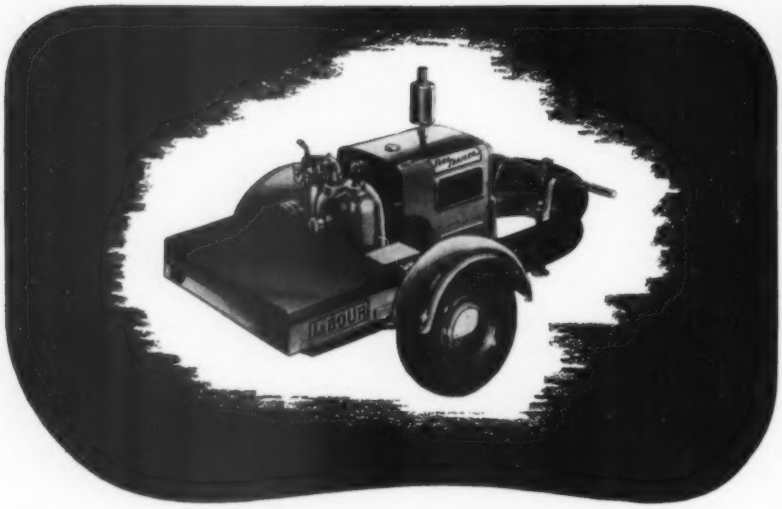


When Mobility Means More Than Size . . .

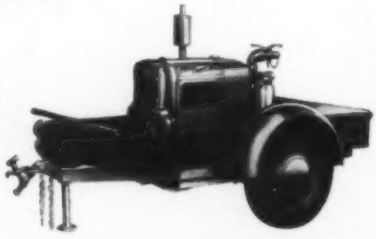
If obstructions, weak bridging, and soft ground block and endanger heavier equipment, or when narrow passages crowd larger apparatus, a LaBour Fire Trailer is often the most practical pumper to use.

Balanced light weight and small size make it easy to handle. Any car can pull it; no special hitch is required. One man can move it over smooth ground. A few men can pull it over the toughest terrain. The Fire Trailer is designed for mobility, to be brought in to fight where big trucks dare not or cannot go.

For the difficult jobs as well as the normal, your LaBour Fire Trailer is a capable aid. Delivering 150 GPM at 100 lbs. pressure, it is a self-priming centrifugal pumper. The pump is inherently self-priming, requiring neither manual nor mechanical manipulation. Being centrifugal in type with an open impeller, it is almost impossible to clog. Dirty water cannot injure the pump. Since the Fire Trailer needs no priming crew and is easy to move, one man if necessary can effectively work by himself.

Get ready for the times when a *mobile* pumper will mean more than the size. Send for your FREE copy of Bulletin 49. Get all the facts of the LaBour Fire Trailer now.

THE LABOUR CO., INC.
Elkhart, Indiana
U.S.A.



LABOUR FIRE TRAILER

Trails ANY Car to the Fire!

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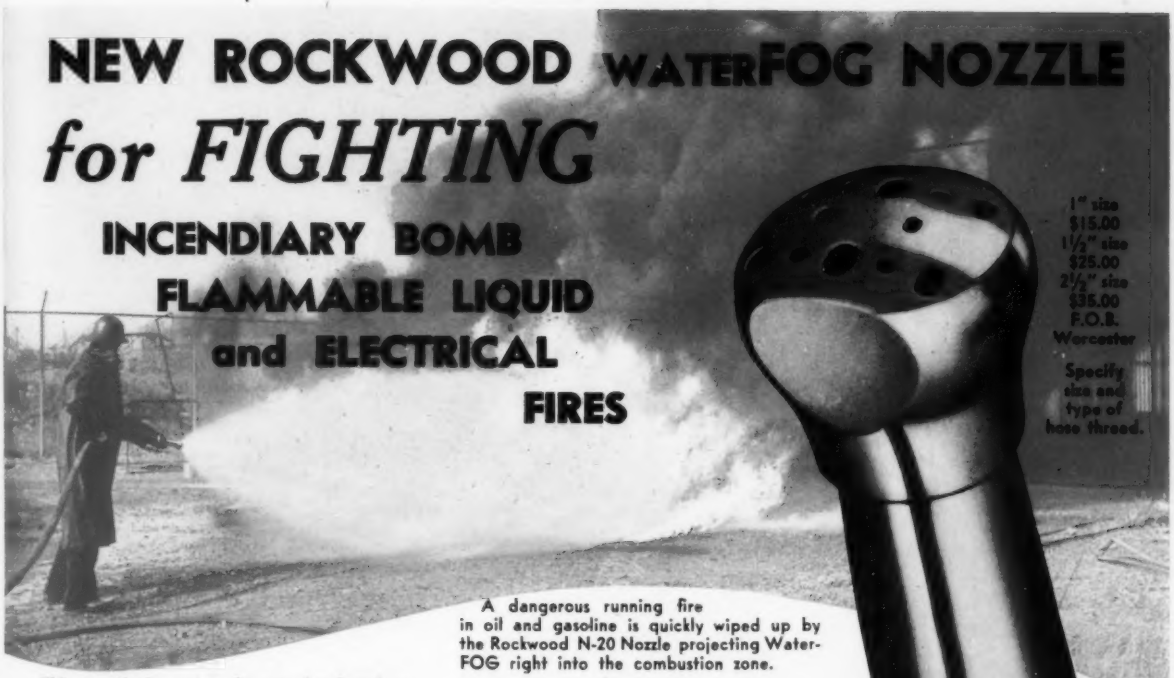
NEW ROCKWOOD WATERFOG NOZZLE *for FIGHTING*

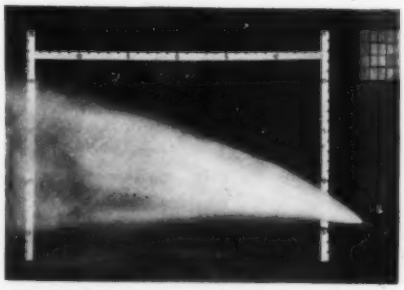
INCENDIARY BOMB FLAMMABLE LIQUID and ELECTRICAL FIRES



A dangerous running fire in oil and gasoline is quickly wiped up by the Rockwood N-20 Nozzle projecting WaterFOG right into the combustion zone.

Rockwood N-20 WaterFOG Nozzle converts plain water into WaterFOG—the remarkable new extinguishing agent. Projects a larger WaterFOG pattern greater distance by Rockwood's new method—*internal impingement!*

This practical new nozzle was developed so that firemen can *safely* combat three dangerous hazards which confront almost every fire department today—incendiary bombs, flammable liquid fires and fires in high voltage electrical equipment.



WaterFOG pattern discharged by the new N-20 WaterFOG Nozzle is measured on this huge scale at the Rockwood testing grounds.

First, the new Type N-20 Rockwood WaterFOG Nozzle gives ordinary water remarkable new power to extinguish fires by generating it into WaterFOG. Second, by means of a new method known as *internal* impingement, developed by Rockwood engineers, it is possible to project a larger, dense pattern of *low velocity* WaterFOG far greater distances than heretofore has been possible.

Thus, the Type N-20 Rockwood WaterFOG Nozzle gives you more powerful and faster action in extinguishing fires in flammable liquids and materials as well as in ordinary combustibles. It will put out in a few seconds burning oil and phosphorous types of incendiary bombs. Using the N-20 Nozzle from a safe distance, firemen can render harmless the dangerous thermit-magnesium bombs—by accelerating their consumption and thoroughly cooling and wetting down the surroundings. The long range and extremely low conductivity of the WaterFOG it discharges, makes the Rockwood Type N-20 a nozzle which firemen can use safely in fighting fires in oil filled transformers and other electrical equipment carrying high voltages.

ROCKWOOD WATERFOG APPLICATORS

Another new fire fighting weapon already in wide use by municipal fire departments, industrial plants, institutions, ships, etc. These applicators guard against hazardous fires so difficult to extinguish by ordinary methods. All types of oils, kerosene, mineral spirits and even gasoline in small containers—are *safely* extinguished by WaterFOG Applicators. Economical operation. Construction is simple, sturdy. There are two standard sizes—6 ft. lengths and 10 ft. lengths, equipped with ball-type shut-offs.

Order Rockwood WaterFOG Applicators and Hose Nozzles from your regular Fire Equipment Distributor.

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6 ft. size $40.00 F.O.B. Worcester

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Specialists in the Engineering, Manufacture and Installation of Fire Protection Equipment for 36 Years

54 HARLOW STREET **WORCESTER, MASSACHUSETTS**

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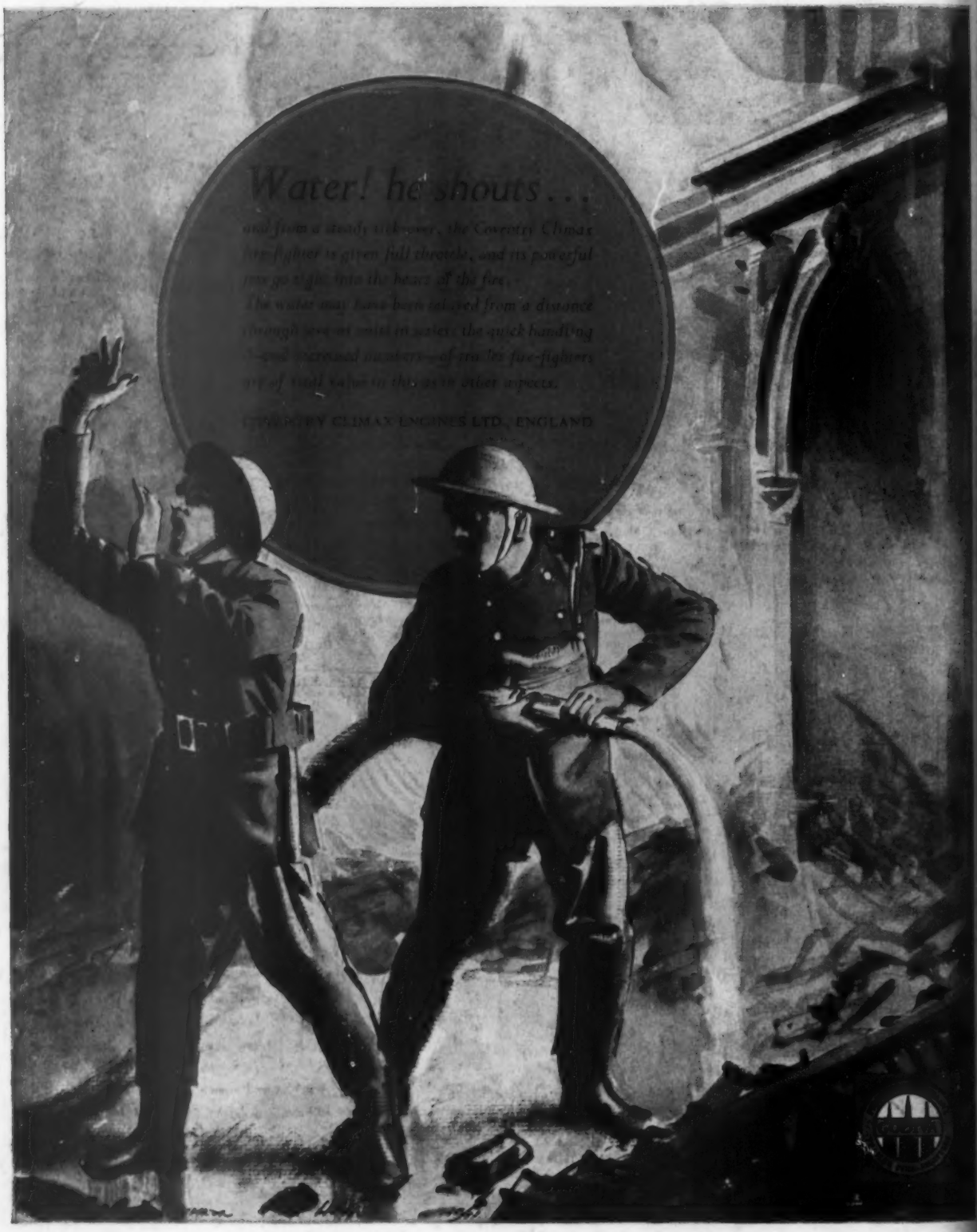
Water! he shouts . . .
and from a steady withdraw, the Coventry Climax
fire-fighter is given full throttle, and its powerful
jets go right into the heart of the fire.
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through sea or mud in water; the quick handling
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